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THESIS

A HISTORY OF THE MILLS ALONG THE NEPONSET

Submitted by

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(A.B. University of Massachusetts, 1947; A.M. University of Pennsylvania, 1949)

In partial fulfillment of requirements for the degree of Master of Education 1951

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INTRODUCTION

This study has a two-fold purpose. Its first aim is to present a documented history of the mills along the Neponset River, from colonial times to the present day. Its second aim is to suggest methods for making this study of some use to teachers of history in the communities bordering on the river.

The central concept is the idea of process, of development. The flow of events on the local scene is related to larger movements taking place in the nation. In the first chapter establishment of the mills is traced to the primitive needs of a frontier society: food, clothing, shelter and defense against the Indians. The following chapter discusses conflicts between colonial industrialists and English authorities. Local aspects of the revolutionary struggle are then presented.

The third chapter examines the social and technological changes taking place in the national period. The merchant-industrialist is supplanted by the industrialist, specializing in one product. Ownership of the mills yields, finally, to the giant corporation. Accompanying

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these changes is the concentration in ownership of the several mills. Advances in technology are illustrated by the changeover from water, to steam and electrical power.

Modern social problems come to the fore in the next chapter, where the subject of labor in the mills is discussed. The employment of child and women workers, the improvement in wages and hours, and the rise of trade unions are reviewed. Chapter five deals with the topic of government aid to the paper mills and presents an account of the early trade associations in the paper industry.

The last chapter of the history proper narrates the controversies involving the Neponset mills. Although the events are mainly of local significance, two tendencies are revealed. First, the struggle between the downstream millowners and the upstream farmers is resolved in favor of the industrialists. Second, the lawsuits involving water rights showed that industries were crowding each other along the stream and that the advent of steam power would solve the problem for the hard-pressed mills.

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The final chapter, addressed to teachers, has as its theme: The history of the decouset mills is the history

of American industry in miniature. With this thought in mind, a local storehouse of information can be drawn upon to enliven and enrich courses in American history in the schools of the Neponset region.

CHAPTER I

THE FIRST MILLS

One of the steps in converting this section of the North American continent into New England was the Anglicizing of place names. Thus, the descriptive appellation Trimontaine was altered to Boston and aboriginal-sounding Mattapan became Dorchester. Of course, the process was not universal. The very name of the Massachusetts colony was of native origin. By some rare chance, the Neponset River also was spared, and was to flow on, with various spellings, bearing the name of the principal tribe in the area.

The river, although its Indian name was retained, soon had to learn English ways. Its waters, before they found their outlet in the sea, were led into dams and escaped only after yielding part of their energy to the water-wheels of industry. The following pages will present an account of the mills that were erected on that part of the river which extends from the Tileston and Hollingsworth plant to the Walter Baker mills.

¹ Nathaniel B. Shurtleff, editor, Records of the Governor and Company of the Massachusetts Bay in New England, 2nd edition, Boston, 1853-4, vol. 1, p. 75.

²Dorchester Antiquarian and Historical Society, History of the Town of Dorchester, Massachusetts, Boston, Ebenezer Clapp, Jr., 1859, p. 580.

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²Dorchester Antiquerian ind distortical Scotlety, History of the Town of Dorchester, Leasachusetts, Boston, Ebenezer Clapp, Jr., 1359, 1. 580.

During the seventeenth century, the few mills on the Neponset were concerned with the basic needs typical of frontier life. Provision of food and defense against the Indians were aided by harnessing the river. The grist mill and powder mill on the Neponset were pioneer establishments, being the first in their respective fields in New England.³

Israel Stoughton, a colonist noted for his outspoken independence as well as his enterprise, erected the grist mill on the north bank of the river, close to tidewater, in 1634. The Dorchester Plantation, in authorizing the mill privilege also permitted him to erect an adjoining fish weir. The community exacted a promise from Stoughton "not to sell away the said mill to any without the consent of the plantation first obtayned." The Massachusetts General Court confirmed the grant, adding the stipulation that alewives caught in his weir were to be sold at five shillings per thousand.

³Dorch. Hist., p. 601.

⁴Dorchester Town Records, 2nd edition, in Fourth Report of the Registry Department of the City of Boston, 1880, Boston, 1883, p. 5.

⁵Shurtleff, op. cit., vol. 1, p. 114.

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Shurtleff, op. cit., vol. 1, v. 114.

England of the legal prescriptions regarding water power. The damming of streams was a privilege, whose enjoyment required the permission of the community. Milling, along with many other economic activities, was regulated by law during the colonial period. The rates the miller could charge were fixed. He could take as his toll only one-twelfth of the corn and one-sixteenth of the wheat. On the separation of Milton from Dorchester, in 1662, the parent town agreed that Milton could assess taxes on the mill, although it lay within the Dorchester boundaries. 7

Indicative of the frontier nature of the enterprise was the fact that the mill was a central point for the Indians of the neighborhood. We find that the Reverend John Eliot preached to the Indians there. With the growth of white population around the grist mill, the Indians were induced to move. They were resettled at Ponkapoag, in Canton.⁸

Davis R. Dewey, "Economic Organization," in Albert
Bushnell Hart, editor, Commonwealth History of Massachusetts,
New York, The States History Co., 1927-1930, vol. 1, p.429.

⁷Shurtleff, op. cit., vol. 4, part 2, pp. 50-1; Dorch. Hist., pp. 600-2.

⁸Albert K. Teele, editor, <u>History of Milton, Mass.</u>, 1640-1887, Boston, 1887, pp. 8,9.

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It may be inferred that the grist mill was reconstructed in 1681, for on June 24 in that year Rev. Peter Thacher of Milton noted in his journal that he "went to raising of the Widow Gills Mill." During the previous decade the property had been transferred to the Gill family. 10

Thus the water-power era was ushered in. A primary need, food, impelled the colonists to this first effort. An equally pressing motive, defense of their lives against Indian marauders, led to the erection of the second mill, a gun powder manufactory. In spite of the exposed situation of the settlements, 11 the powder mill got off to a slow start. In 1672 Walter Everenden complained to the General Court that he was impeded in his attempt to set up a powder mill by a ban on the emigration of workers, imposed by the English authorities. He petitioned for permission to solicit contributions for his project. 12

⁹Teele, op. cit., p. 645.

¹⁰ Dorch. Hist., pp. 600-2.

¹¹Dorchester was described in 1663 as "a frontier town pleasantly seated, and of large extent into the mainland." Samuel J. Barrows, "Dorchester in Colonial Times," in Justin Winsor, editor, The Memorial History of Boston, Boston, J.R. Osgood, 1880-1, vol. 1, p. 432.

^{12&}quot;Massachusetts Archives," State House, Boston, MS, vol. 59, p. 124.

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¹² Massachusetts archives," State Mouse, Scoton, MS, vol. 50, p. 124.

When the undertaking was finally organized, it had an incongruous religious flavor. Two ministers, a deacon of the First Church of Boston and two merchants of that town formed a partnership. A strip of land on the Milton bank of the river was purchased and construction was completed in 1675, in time to serve the colony during the critical years of King Philip's War. 13

To guard the mill against attack, the General Court ordered Milton and Dorchester each to appoint a watchman. 14

Conscription of labor was permitted for the construction of a stone watch house. The owners could "repair to any magistrate who by the law is impowered to give warrants to impress workmento carry on public works. "15

Thus the basic needs, food and protection against the Indians, brought industry to the Neponset, in the seventeenth century.

¹³ Dorch. Hist., pp. 607-611; Horace E. Ware, The Powder Mill on the Neponset, 1901.

¹⁴ Shurtleff, op. cit., vol. 5, p. 51.

^{15&}lt;u>Ibid.</u>, p. 64.

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¹⁴ Shartleff, pp. cit., vol. 5, p. 51.

The eighteenth century saw the blossoming of industry along the Neponset. The diversity of the mills is to be noted. During the remainder of the colonial period the following types of mills were added: leather fulling, cloth fulling, saw, iron slitting, paper and chocolate. The need for more water power led to the development of another center of activity, farther up the river. The name Lower Mills was applied to the area near the original grist and powder mills. The upstream area, where Mattapan Square is now located, was called Upper Mills. 16

A grist mills was erected in 1713 in this new industrial region, on the Dorchester side of the river. 17 It was not until 1761 that a new-comer entered the field. The owner claimed that he had "at Great Labour and Expence Erected in the town of Dorchester near Milton bridge, the first and only one of its kind in America, a Mill for Manufacturing that wholesome and useful grain Barley. 18

¹⁶ In the early eighteenth century Mattapan was known as the 500-acre lot. It contained pasture land, used as a common by the proprietors. Dorch. Hist., pp. 596-7.

¹⁷ Ibid., pp. 620-1.

¹⁸ Massachusetts Archives, vol. 59, p. 473.

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¹⁸ massachusetts archives," vol. 59, p. 473.

Four years later a grist mill was constructed on the site of the old Milton powder mill. 19 That venerable establishment had continued in operation until 1744, when an explosion wrecked the plant. The business had been in a flourishing condition, as evidenced by the building of a branch in Dorchester. The mill on the north side continued until 1757, when it was converted into a fulling mill. 20

The fulling process was employed by both the cloth and leather trades. The need for a cloth fulling mill had been expressed in 1660. Two Dorchester citizens promised to erect such a mill, but no record of its existence has come down to us. 21 An indirect proof of the non-existence of the Dorchester mill is obtained from the journal of Rev. Thacher of Milton. In 1681 he wrote that his wife had gone to the Roxbury fulling mill and had returned with a cloak. 22 If a similar establishment had been set nearby, on the Neponset, it is unlikely that the minister's wife would have made the long trip to Roxbury.

¹⁹Dorch, Hist., pp. 618-619.

²⁰ Ibid., p. 611.

²¹ Dorchester Town Records, p. 98.

²² Teele, op. cit., p. 646.

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¹⁹ Doroh. Hist., pp. 618-619.

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²² Teele, op. ott., p. 646.

If the Thacher household were typical, the wool for the cloak had been spun and woven in the home. Before the advent of the fulling mill, the finishing processes were also the housewife's responsibility. After the cloth came from the loom, the material was not yet ready to be made into clothing. To make the fabric soft and pliable, it was subjected to the fulling process. In a primitive community this would be done by wetting, soaping and pounding the cloth with wooden mallets.²³ The water-powered fulling mill relieved the household manufacturers of this burdensome task. The fuller was sometimes called on to dye and shear the cloth. Finer goods required his expert services.²⁴

²³Rolla M. Tryon, <u>Household Manufactures in the United</u>
States, 1640-1680, Chicago, University of Chicago Press,
1917, p. 210.

²⁴ The cloth was kept thoroughly wet with soapy water and subjected to pressure or repeated beatings. The fulling stocks where the operation really occured consisted of large wooden box standing on end and with one side partly open. In the upper part of the space within the box were two rollers, and at the bottom was a trough filled with the soapy water. The piece of cloth, tied end to end, was passed between the rollers and was drawn up from the water as, driven by the water wheel of the mill, these rollers revolved ... later wooden hammers were added, these and the rollers being both actuated by water power ... The fuller's contribution lay in the khowledge, gained from experience of the mixture of soap and water-later of fuller's earth as well ... and of the proper speed and duration of the shrinking operation." Arthur H. Cole, The American Wool Manufacture, Harvard University Press, Cambridge, 1926, vol. 1, p. 12.

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The erection, around 1717, of a fulling mill near the original grist mill, was a boon to the cloth makers of the region. Here again, as in the founding of the powder mill, religion and industry were wedded. Rev. Joseph Belcher, of Dedham, had inherited the grist mill and now added the new enterprise to his possessions. In 1757 William Preston converted the Dorchester powder works to a fulling mill. 26

Another branch of the clothing industry, leather manufacture, had prior claim to Neponset power. A leather fulling mill was built by David Colson, a fellmonger, around the year 1709. It was then that the upper reaches of the river, in what is now the Mattapan Square area, were first dammed. A canal was dug, leading from the rapids to a lower point on the stream. The artificial waterway provided millsites entirely within the boundaries of Milton.²⁷

Leather fulling was a process similar to cloth fulling.

The object was the same, to make the material softer and

²⁵Dorch. Hist., p. 602.

^{26&}lt;u>Ibid.</u>, p. 611.

^{27&}lt;u>Ibid.</u>, pp. 620-623.

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Doron, Hist., J. 602.

²⁶ Ibid., p. 611.

²⁷ mid., no. 620-623.

more pliable.²⁸ In all likelihood, the leather produced at the mill was used in the making of leather clothing. In the previous century leather clothing was used extensively, especially by the laboring classes. Around 1629 leather garments were considered essential for pioneers. Men sailing for New England in that year were advised to include leather suits in their wardrobe. In the eighteenth century fine quality leather breeches and jackets were made in Boston.²⁹ To meet the needs of the trade, two leather fulling mills had been established at Upper Mills by 1741.³⁰

Food, clothing and shelter, in the order named, were provided by the Neponset mills. Not until late in the colonial period, in 1765, was a saw mill constructed. Much earlier, however, nail-rods and nails were manufactured on the Neponset. In 1710 a slitting mill, the first in Massachusetts, was erected at Upper Mills. Hammered iron bars

²⁸ Victor S. Clark, <u>History of Manufactures in the United States</u>, 1607-1860, Washington, D.C., Carnegie Institution of Washington, 1916, vol. 1, pp. 167-8.

²⁹ George F. Dow, Every Day Life in the Massachusetts Bay Colony, Boston, The Society for the Preservation of New England Antiquities, 1935, pp. 60-1, 70.

³⁰Boston Newsletter, April 24, 1741.

³¹ Dorch. Hist., pp. 618-619.

^{32 &}lt;u>Ibid.</u>, pp. 620-3. William B. Weeden, <u>Economic and Social History of New England</u>, 1620-1789, Cambridge, Houghton, Mifflin, 1894, vol. 2, p. 499.

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²⁹George F. Dow. Every Day Life in the Desagolusetts Day Golony, Boston. The Society for the Dreservation of Jew England Antiquities, 1935, pp. 60-1, 70.

³⁰ Hoston Maysletter, 1911 24, 1741.

Proced Mat., pp. 618-619.

Santal Mistory of May England, 1920-1939, Garbridge,

were rolled and slit into the proper dimensions for nail rods. A large proportion of the rods were sold to merchants, who peddled them to farmers. Nail-making was an important domestic industry and farmers occupied themselves on long winter evenings converting the rods into nails, which could be traded for other commodities.³³

An interesting story, unfortunately without confirmation, is told by Weeden of the efforts of Peter Oliver of Middleboro to discover the methods practiced at Milton. 34

It is said that he offered a reward to any one who should obtain the secrets of the slitting process, jealously guarded by the craft. One Hashai Thomas, of Middleboro, disguised himself, assumed simpleminded ways, and idled his time around the mills at Milton. Too lowly in appearance to excite suspicion, he worked his way into the rude mill while the workmen were at dinner. Once in, his quick eye and natural mechanical gifts mastered the principles of the machinery. He constructed similar works at Middleboro, and Oliver's rods soon rivalled those from Milton in the market.

³³Weeden, op. cit., vol. 2, p. 499; John Leander Bishop, A History of American Manufactures from 1608 to 1860, Philadelphia, Edward Young, 1864, vol. 1, p. 499. A nail-making shop was added to the Milton mill at a later date. "Suffolk Deeds," MS, Suffolk County, Registry of Deeds, Boston, vol. 101, p. 230.

³⁴Weeden, op. cit., vol. 2, p. 499. The Middleboro mill rolled bars down to 3" x ½" and slit them into 5/16" wide rods. William H. Harrison, "The First Rolling-mill in America," Transactions of the American Society of Mechanical Engineers, (1881) vol. 2, pp. 103-5.

were rolled and allt into the proper dimensions for mail rods. A large proportion of the rods were sold to merchants, who peddled them to farmers. Hell-making was an important domestic industry and farmers occupied themselves on long winter evenings converting the rods into mails, which could be traded for other commodities. All

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[&]quot;Surfale Deed: "Surfale Deed: " 15, Surfale Deeds, Zonn Leander Lishop A History of American Leandragathres from 1608 to 1860. Philadelphia, Edward Toung, 1864, vol. 1, p. 499. A neil-making show was added to the Milton mill at a leter date. "Surfale Deed: "As, Surfale County, Registry of Deeds, Zoston, vol. 101, p. 230.

Squeeden, on all, vol. 2, p. 499. The Middleboro mil rolled bers down to 3" x 4 and slit them into 5/16" wide rods. William E. Marrison, "The First Rolling-mill in America," Arresactions of the American Society of Mechanical Engineers, (1801) vol. 2, pp. 103-5.

The Neponset mill did not compete for long. A fire soon razed the mill and for a long period it remained in disuse. The first of the owners to find a purchaser were without avail, until 1764. In that year James Boies, a local paper manufacturer, bought the site. He, in turn, tried to dispose of the mill, but with scant success. His advertisement admitted frankly, "The Mill is much out of repair." He then continued in a patriotic vein, "It is hoped that some Person for the good of the Country will be spirited to purchase the same and save that valuable Branch of Manufactory." The sone person for the good of the country will be spirited to purchase the same and save that valuable Branch of Manufactory." The sone person for the good of the country will be spirited to purchase the same and save

As the general public was unresponsive, Boies turned to the provincial authorities for assistance. Some years previously, his plea for a loan to rebuild his paper mill had been favorable received. It was not unlikely that the slitting mill would be deemed equally worthy of aid from the public treasury. He addressed a petition to

^{35&}lt;sub>Dorch, Hist.</sub>, p. 621.

^{36&}quot;Suffolk Deeds," MS, Suffolk County, Registry of Deeds, Boston, vol. 101, p. 230.

³⁷ Boston Evening Post, Dec. 24, 1753; May 27, 1765.

³⁸ Acts and Resolves of the Province of Massachusetts
Bay, Boston, 1869-1922, 1763-4, ch. 151.

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³⁷ dostun Lyenine Ross, Dec. 24, 1753; Noy 27, 1765.

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Governor Bernard, the Council and the House of Representatives in June, 1768. With the florid verbosity encountered in manuscripts of that period he wrote³⁹

That in May 1764 he purchased the Slitting-Mills. which were late part of the Estate of Mr. Jackson, Dec ease d, with Right of the Stream, together with all the Implements and Utensils necessary to the cutting and Slitting of Iron, which then belonged to said Mills, with an Intention to dismantle the same and erect a Set of Works for the Manufacture of Paper. But having been informed of a late Act of the British Parliament Act of 1750 ...whereby the erection of new Slitting Mills is prohibited for the future; and being further advised, that if the Chimnies, Furnaces, etc. Appurtaining to said Mills should be removed it would be deemed a new Erection, within the Meaning of said Statute. afterward to build a Slitting Mill on the same Spot; and being also informed that the Iron Manufactory might yet be carried on, with great Advantage to the British-American colonies in general, and to this Province in particular, as well as the private Interest of any Individual who would with a hearty Zeal, engage in the same Manufacture,

He was induced from these motives to suspend, for the present, the Demolition of the said Mills, till he was able by a thorough Enquiry, to obtain a full know-ledge of all the Discouragements incident to the Undertaking and Progress of the same Manufacture.

That in consequence of this Resolution he put himself to an extraordinary Expence in placing his Paper-works upon another Part of the River, leaving the Place where the Slitting-Mills stand, though a more convenient Spot for carrying on the Manufactory of Paper.

That upon making the Inquiry before mentioned, your Petitioner finds, that the grand Obstacle, which prevented the Nailing-Business (one of the Main Branches of the Iron-Manufacture) in times past, was the high price for the cutting the Rod, which from the best Information, that your Petitioner, from a very diligent Inquiry, has been able to obtain, is a

³⁹ Massachusetts Archives," vol. 59, pp. 548-550.

Covernor Bernard, the Council and the House of Hapresentatives in June, 1768, with the florid verbesity

That in May 1764 he purchased the Slitting-Milis, which were lose part of the matate of it. Decision. Dec ease a, with Right of the Stragn, together with all the Implements and Utensils accesses to the cutting and Slitting of Irum, which then belonged to cutting and Slitting of Irum, which then belonged to acid Milis, with an intention to alamente the same and erect a Set of Journ for the Landscoture of Fayer. But heaving ocen andowned of a late Act of the British Conflament Act of 1750. . Thereby the erection of new Slitting Milis is prohibited for the erection of new Slitting Milis is prohibited for the followes, Standscos, Within the Meaning of Stald Standscorp and being also informed that the Iron Connidactory and being also that the Iron Connidactory with the December on, with great diventage to the Intitial-American colonies in general, and to this Ironical, engage in the same Landscoure, Interest of any Individual who would with a nearty Interest of any Individual who would with a nearty Iseal, engage in the same Landscoure,

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³⁹ Massachusetts archives, " vol", 59, pp. 549-550.

much greater Price, than your Petitioner is able to demonstrate he is able to do the work for.

That the only thing which now prevents your Petitioner from an immediate Application to the Iron-manufacture is the want of a sufficient Capital to engage in so expensive an Undertaking...

In spite of this eloquent plea, the provincial government did not grant the loan. Undaunted, Boies reconstructed the slitting mill the following year, at his own expense. He advertised in Nathaniel Ames' Almanack for 1769 that he would cut iron for £6 13s 4d per ton, a reduction of four pounds from the previous rate. 40 Nail rods were sold at 30 shillings per hundred pounds. 41

His enterprises must have proved profitable, for we find Boies en route to England, in 1770, 42 planning to recruit skilled workers for his mills. Governor Hutchinson wrote to Secretary Pownall of the Board of Trade regarding the manufacturer's intentions. The governor took a rather dim view of Boies' chances of success, in the

^{40&}quot;Milton Mills," New England Historical and Genealogical Register, (1857) vol. 11, p. 258.

⁴lTeele, op. cit., p. 357.

⁴² Massachusetts Gazette, February 8, 1770.

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[&]quot;Ongstranding," New and and Historical and Geneal merister, (1857) vol. 11, p. 258.

Treels, on. ott., p. 357.

⁴² assaybusetts Garette, Tebruary 8, 1770.

face of English competition. He reported 43

We yet could not make any nails less than a Decknail so cheap as we import them from England, but he is enterprising and a schemer and fancies he can procure workmen on such terms as to afford a nail as small as the 3 penny nail as cheap as they can be bought in England.

Whether Boies succeeded in his search for artisans is not known. However, evidence points to the continuance of the iron works into revolutionary times, after which there is silence.44

An intimation of coming events in the paper industry was given in 1724, when this advertisement appeared in the New England Courant: 45

Some Gentlemen design to set up a Paper Mill in New England, if a supply can be had to carry on that business: These are therefore to give Notice that James Franklin, Printer, in Queen Street, Boston, buys Linen Rags, either coarse or fine, at a Peny a Pound.

Following this notice, in 1728, the General Court passed "An Act for the Encouragement of Making Paper", which led

^{43&}quot;Massachusetts Archives," vol. 26, p. 437.

⁴⁴ Jeremiah Smith Boies, "Historical Reminiscences," New England Historical and Genealogical Register, (1852) vol. 6, p. 256.

^{45&}lt;sub>Dow</sub>, op. cit., pp. 137-8.

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^{43&}quot;Massachusetts Archivez, " vol. 26, p. 437.

Test Jeroniah Smith Boies, "Historical Reminiscences," [Sew Jewisselend Negister, (1952) vol. 5, 5, 5, 2, 256.

⁴⁵pow, on. ait., pp. 137-3.

England. The measure granted a ten year monopoly of paper manufacturing to five partners. During the ten year period no one in the colony was to make paper without authorization of the grantees. In exchange, the legislature specified a graduated production quota. By the end of 1732 the mill was to produce 500 reams per year. Of this amount, 150 reams were to be "good merchantable writing paper, of equal goodness with the paper commonly stamp'd with the London arms." 46

The partners leased a mill on the Milton bank of the river from Rev. Belcher. 47 The equipment that they installed used manual labor, for the most part. Water power was used to run a macerating machine, which ground rags into pulp. The process had been described, both verbally and pictorially by Comenius, in the previous century. His readers were informed 48

Now <u>Paper</u> is in use which the <u>Paper-maker</u> maketh in a <u>Paper-mill</u>, of <u>Linen rags</u>, stamped to a Mash, which, being taken up in frames, he spreadeth into <u>Sheets</u>, and setteth them in the Air that they may be dryed.

⁴⁶ Acts and Resolves of the Province of Massachusetts
Bay, 1728, ch. 17.

⁴⁷ Dorch. Hist., p. 612.

⁴⁸ Johann Amos Comenius, Orbis Pictus, reprinted from 1727 English edition, Syracuse, C.W. Bardeen, 1887, pp. 113-114.

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⁴⁵Acts and Resolves of the Province of Lassachusetts

Poren. Mish., p. ME.

⁴⁸ Jonean Agos Comenius, Orbis Flotus, reprinted from 1/27 English edition, Streetse, C. J. Bardeon, 1837, 1937, 193. 113-114.

In colonial times, paper manufacturing differed but slightly from this description. The only important modification was that pulp was produced by grinding, instead of by beating. A more detailed account of the papermaking process is offered by Clark, in his comprehensive History of Manufactures in the United States. He writes 49

In a New England paper mill, about the time of the Revolution, rags were first cut by hand on a scythe fixed on a post, then ground by water-propelled "engines", consisting of two rollers, 2 feet long by 26 inches in diameter, running over an iron bed-plate containing the macerating knives or ridges. This was the only process in which power was employed. The pulp was molded into sheets, pressed, sized, glazed and finished by hand labor. The capacity of a "two-engine", two-vat mill did not exceed 250 pounds of paper in a 15-hour day, and three months elapsed between the first operation and the final preparation for market. A knowledge of the craft was less generally diffused than that of brewing or tanning; so labor limitations were a t times an obstacle to its extension... There were more mills in Pennsylvania than in Massachusetts, partly because linen was more generally worn in the warmer colonies.

The mill went into production in 1730 and by 1733 the value of the paper produced there exceeded expenditures. The partners took an active part in running the mill. Deering was the superintendent and agent. Henchman paid the taxes assessed by the town of Milton. Faneuil bought rags, the essential raw material. Felting, needed to absorb moisture from the wet sheets, was obtained by

⁴⁹Clark, <u>op</u>. <u>cit</u>., vol. 1, p. 168.

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Clark, on. old., vol. 1, p. 166.

Hancock. In spite of their personal interest, the mill failed to pay for itself after 1737. A possible reason for this decline may have been the lack of skilled labor. At times the total working force consisted of a manager and three boys. 50 Subject to such limitations, only production of coarser grades of paper was feasible, and the mill could not manufacture writing or printing paper. 51

In 1743 the value of the paper made at the Milton mill was only slightly more than double that of the initial year. By 1748 Jeremiah Smith had acquired complete possession of the business, but he was forced to let the mill fall into disuse. Revival of the industry can be credited to James Boies, who was linked to Smith by family as well as business ties. Boies worked as a supercargo on a ship carrying passengers from England to New York. On one of his voyages, in 1760, he met Richard Clark, a papermaker, and induced him to come to Milton. With this

⁵⁰William T. Baxter, "Daniel Henchman, A Colonial Bookseller," Essex Institute Historical Collections, vol. 70, no. 1, (January 1934) pp. 26-9.

^{51 &}lt;u>Dorch. Hist.</u>, pp. 613-614.

^{52&}lt;sub>Baxter</sub>, op. cit., pp. 26=27, 29.

⁵³ Teele, op. cit., p. 397.

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Southliam T. Barter, "Daniel Henchman, & Coloniel Bookseller," Essen Lostitute Historical Collections, vol. 70, no. 1, (January 1954) op. 20-9.

Floren, Mist., pp. 613-614.

Parter, on. ott., pr. 20-27, 29.

⁵³reele, oc. oit., p. 357.

skilled artisan in charge, production was resumed, at a greater rate and with better quality than previously.

The paper industry was now successfully established on the Neponset.54

The perpetual difficulty of recruiting competent workers was briefly alleviated, from an unexpected quarter.

During the French and Indian Wars, a furlough was obtained for a British soldier, a papermaker by trade.

However, in spite of the pleas of the hard-pressed manufacturers, he was sent to Canada, where he met his death. 55

The problem of sufficient labor was followed by the problem of adequate capital. Boies and Clark, in partnership,
had taken over the paper mill, but found themselves
hampered by the poor condition of the equipment. Lacking
funds of their own, they turned to the colonial government
for aid. The two entrepreneurs framed a petition, stating
that "the Manufacturing of Paper within this Province
would be of Publick advantage as it would prevent Large

⁵⁴Ellery B. Crane, "Early Paper Mills in Massachusetts," Proceedings of the Worcester Society of Antiquity, vol. 7, (1886) pp. 116-117.

⁵⁵ John Hayward, The New England Gazetteer, Boston, John Hayward, 1849, p. 205.

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Proceedings of the normer to late of introducty, vol. 7, (1886) pp. 11c-117.

⁵⁵ John Tayward, The New England Garetteen, Boston, John Heyward, 1949, p. 205.

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The more abundant water power of the Upper Mills site attracted Boies and Clark. Not long after receiving their loan from the province, they acquired the slitting mill property. The ruined iron works was allowed to stand, as has been previously noted. A short distance away they erected a paper mill, which was built by 1765. The thriving condition of the new mill was described by Governor Hutchinson in a report to the Lord Commissioners for trade. In 1769 he sent aletter to the London officials,

^{56&}quot;Massachusetts Archives," vol. 59, p. 555.

⁵⁷ Acts and Resolves of the Province of Massachusetts
Bay, 1763-4, ch. 151.

^{58&}quot;Suffolk Deeds," Suffolk County, Registry of Deeds, MS, vol. 101, pp. 109, 231.

^{59&}lt;u>Ibid.</u>, vol. 104, p. 242.

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⁵⁷ Acts and Resolves of the Province of Massachusetts

⁵⁸ saffolk Deeds," Suffolk County, Registry of Deeds, MS, vol. 101, pp. 109, 231.

⁵⁹¹⁰¹d., vol. 104, p. 242.

stating 60

A paper mill which had been erected in the Town of Milton within this Province having gone to ruin, one James Bois, who had sometimes improved this mill, about three or four years ago erected a new mill upon the same stream, about two miles distance from the former, where more paper has been manufactured than had been at the former mill in the course of thirty years, and the undertaker meets with such encouragement that he is preparing to erect another paper mill, near to the first mentioned and the owner of the first mill is also rebuilding that. As I have a country house in the same town their works are every day under my eye and observation, and the Owners of the works are known to me and I douby not depend upon a full supply of materials for as much paper as they can manufacture at the several mills.

To continue his expansion Boies needed men acquainted with the papermaking trade. One of the aims of his 1770 trip to England was to recruit skilled workmen for his paper mill. 1 It may be conjectured that his mission was successful, for, by 1771, another paper mill had been built on the north side of the trench. This venture was a partnership between Boies and Hugh McLean, a former shipmate. 2 Two years later George Clark built a paper mill farther upstream, on the Dorchester side, where the present Tileston

^{60&}quot;Massachusetts Archives," vol. 25, p. 330.

^{61&}lt;u>Ibid</u>., vol. 26, p. 437.

^{62&}lt;sub>Dorch. Hist.</sub>, p. 623.

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Dunassanusetts archives," vol. 25, p. 330.

olunid., vol. 26, p. 439.

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and Hollingsworth plant is now situated. 63 Thus, during the colonial period, four paper mills were established on the Neponset.

Chocolate manufacturing on the Neponset had very humble beginnings. The story is told with warmth and feeling by Edmund J. Baker, in his contribution to the History of Dorchester. 64

Very early one morning in the fall of the year 1765 a respectable looking young man was found sitting upon a rock in the street near the Lower mills in Dorchester, weeping. A benevolent individual was attracted by the sight of the young wayfarer, and inquired into his situation. He reported himself as John Hannan, from Ireland, - a protestant in faith, a chocolate-maker by trade, and who having come to seek his fortune in America, was a stranger in a strange land, with no acquaintances, no work to be obtained, and his outfit all spent. The Samaritan referred him to James Boies as a country-man of his own, well off in the world, and then erecting mills a mile up the stream.

Boies provided Hannam with a temporary job and then arranged for the proprietors of a grist and saw mill combination, then being erected on the old powder mill site in Milton, to include a chocolate mill. This is claimed to be the first enterprise of the sort in New

⁶³Dorch. Hist., p. 623.

and 26 of the Dorchester history is attributed to Baker by William B. Trask, "Authors of the History of Dorchester, Mass.," New England Historical and Genealogical Register, vol. 44, p. 399, (October 1890).

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England, perhaps the first in British North America. 65
In 1772 the ranks of chocolate makers were joined by
James Baker. He hired part of the original paper mill
at Lower Falls and installed a "run of stones and a set
of kettles. 66 Two years previously Preston had added a
chocolate mill to his fulling mill. 67

Within a decade three chocolate mills had been put in operation. This development indicates the advance of the colonial economy beyond the primiteve stage. Chocolate, although a food item, was far from being a necessity. Improvement in the material well-being of the local population provided a market for chocolate, a commodity which ranked in the luxury class.⁶⁸

⁶⁵ Dorch. Hist., p. 635.

^{66&}lt;u>Ibid</u>., pp. 618-619.

^{67&}lt;u>Ibid</u>., p. 627.

⁶⁸ Of minor importance, because of their temporary nature, were two snuff mills. One was erected at Lower Mills, around 1761. The other was erected at Upper Mills, around 1772. <u>Ibid.</u>, pp. 602-3, 622.

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⁶⁶¹b16., pp. 618-619.

^{67 1510.,} p. 627.

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CHAPTER II

ECONOMIC CONFLICTS AND THE REVOLUTIONARY PERIOD

The tensions and conflicts that finally broke the ties between the colonists and the mother country were woven into the history of the Neponset mills. While the Massachusetts General Court encouraged the development of native industry, the British government, spurred on by merchants and industrialists, carefully scrutinized, and, in some cases, endeavored to check the growth of competing industries in the Bay Colony.

The provincial lawmakers, on a number of accasions, exerted themselves on behalf of local industry. The order facilitating the construction of a watch tower to protect the powder and grist mills was a special case, motivated by the urgencies of King Philip's War. More typical was the ten year monopoly granted to the pioneer paper mill in 1728. A bounty of £20 was given to the owner of a local barley mill, described as the first in America.

¹See above, p.8.

²See above, pp. 18-19.

^{3&}quot;Massachusetts Archives," vol. 59, p. 473.

CHAPTER II

ECONOMIC CONFLICTS AND THE REVOLUTIONARY PERIOD

The tensions and confilete that finelly broke the ties between the colonists and the action country were weven into the history of the Mesonset mills. While the Massachusetts Deurt encouraged the development of Lative industry, the unities government, sourced on by merchants and industrialists, carefully sorutinized, and in some cases, endeavored to check the growth of competing in the Eay Colony.

The provincial lewmakers, on a number of accessons, exerted themselves on behalf of local industry. The order facilitating the construction of a watch tower to protect the powder and grist mills was a special case, motivated by the unsencies of aing Philip's wer. More typical was the ten year accopally granted to the cioneer paper millip 1725. Thounty of 220 was given to the owner of a local barley mill, described as the first in America.

[.]S. ,svode saal

Ros store, pp. 16-19.

Sulussachuietts rehives," vol. 59, p. 173.

Papermaking on the Neponset was aided again by a loan of f400 granted by the legislature to Boies and Clark in 1764. The following year pride in local achievement was displayed, when a Boston newspaper proclaimed 5

The Publick is informed that this Day's Gazette is printed on paper manufactured at Milton; and we doubt not they will judge it to be of as good Quality as any of the kind that is imported...It is earnestly requested that Families would be careful to save all LINEN RAGS, a full supply of them would prevent large Sums of Money from going out of the Province.

The boycott of 1768-9, the colonies' answer to the Townshend Acts, was an aspect of the upsurge of economic nationalism in America. Joining in the movement, the Harvard class of 1768 petitioned to have the rule requiring dark blue or black suits for Commencement set aside. These garments, it would seem, were of English cloth. The students preferred to "appear habited this Day in the Manufactures of the Country".6

The Harvard officials did not yield and the students received their degrees in the prescribed costume. They

Acts and Resolves of the Province of Massachusetts
Bay, 1763-4, ch. 151.

⁵Boston News Letter, May 2, 1765.

⁶Albert Matthews, "Harvard Commencement Days, 1642-1916," Publications of the Colonial Society of Massachusetts, Transactions 1915-1916, vol. 18, p. 351.

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may have been comforted by the knowledge that their theses had been printed "on fine white Demy Paper, manufactured at Milton in New England". 7

Colonial lawmakers once again demonstrated a paternal interest in the paper industry in 1773. The £400 loaned to Boies and Clark by the province had literally gone up in smoke when their paper mill burned. The partners appealed to the legislature for an extension of time and their request was granted. In their petition Boies and Clark claimed that they had "expended large sums of money in building and enlarging their works, for the better carrying on of their business which is of great advantage to the public". They also noted the philanthropic aspect of their enterprise, mentioning "the poorer sort of People...who are employed in picking up Raggs and Ropes, of which the Paper is made."

⁷Boston News Letter, July 21, 1768.

⁸ Acts and Resolves of the Province of Massachusetts
Bay, 1773-4, ch. 32.

^{9&}quot;Massachusetts Archives," vol. 59, p. 594.

¹⁰ Ibid. The fire at the mill brought Boies to the verge of ruin. As Collector of Taxes for Milton he was held accountable for £200, which he was unable to repay. The General Court released the town from responsibility for the sum and Boies was given four years to repay. Acts and Resolves of the Province of Massachusetts Bay, 1772-3, ch. 109; "Massachusetts Archives," vol. 59, p. 580.

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Contrasting with the benign attitude of the provincial authorities, London turned a cold and critical eye on the struggling industries on the other side of the Atlantic.

Mercantilism was the guiding principle. The interests of the colonists were subordinated to the interests of the mother country. In the field of industry, the role of the American provinces was considered to be that of a source of raw materials and a market for English-manufactured goods. The British government was kept informed of industrial developments by the Lords Commissioners of Trade.

This group, reporting in 1733 on the extent of paper manufacturing in Massachusetts, stated 11

This Manufacture...has hitherto made but a small Progress, and can hardly be said, in a strict sense, to interfere with our own Paper; but certainly interferes with the Profit made by our <u>British</u> Merchants upon the foreign Paper sent to this Province; However no Complaint has ever been made to Us against this Law.

The Lords Commissioners relied largely on the reports sent by colonial governors. This information was not always of the highest reliability. Royal officials might not have

Poard of Trade, Great Britain, Representation of the Board of Trade relating to the Laws made, Manufactures set up, and Trade carried on, in His Majesty's Plantations in America, London, 1733, p. 5; also found, with slight changes, in Calendar of State Papers, Colonial Series, America and West Indies, 1732, London, Public Record Office, 1939, vol. 39, pp. 52-62.

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desired to paint too alarming a picture of industrial progress. In at least one instance there is evidence of a sympathetic attitude towards colonial manufacturing on the part of a governor. In 1752 Governor Belcher wrote to an American friend 12

I am in full opinion with you and my other friends in New England that there is no wiser or better measure to go into for retrieving the miserable circumstances in your province than to promote manufactures among yourselves.

An attempt by the British to broaden the sources of their information was rebuked by the General Court. In the Representation cited above, the House of Lords was informed 13

We cannot conceal from your Lordships, that it is with the greatest Difficulty that we are able to procure true Information of the Trade and Manufactures of New England, which will not appear extraordinary, when we acquaint your Lordships, that the Assembly of the Massachusetts Bay had the boldness to summon... Mr. Jeremiah Dunbar Surveyor-General of His Majesty's Woods in North America before them, and pass a severe Censure upon him, for having given Evidence at the Bar of the House of Commons of Great Britain with respect to the Trade and Manufactures of this Province.

By the Act of 1750, banning the erection of any new

¹²Clark, op. cit., vol. 1, p. 203.

¹³Board of Trade, op. cit., p. 13.

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Isosrd of Trade, on . 11. p. 13.

slitting mills in America, Parliament attempted to clamp rigid controls on the American iron industry. 14 There is no evidence that this provision, by itself, prevented entrepreneurs from establishing an iron works on the Neponset, or elsewhere in Massachusetts, for that matter. 15 If any would-be industrialists had ambitions along this line, they could have purchased the Jackson mill and rescued it from its state of decrepitude. When James Boies purchased the property in 1764, he offered it for sale. His patriotic plea went unanswered and he restored the works at his own expense after failing to obtain a loan from the province. 16

Governor Hutchinson, a resident of Milton, informed the Board of Trade that he kept the Neponset mills "every day under my eye and observation". 17 In 1770 he reported the efforts of James Boies to improve his paper and slitting mills. Hutchinson wrote, "I am instructed

¹⁴Arthur C. Bining, British Regulation of the Colonial Iron Industry, Philadelphia, University of Pennsylvania, 1933, p. 64.

¹⁵ Ibid., p. 91.

¹⁶See above, pp. 15-17.

^{17&}quot;Massachusetts Archives," vol. 25, p. 330.

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¹⁷ Massachusetts Tohlves," vol. 25, p. 330.

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Instructions you will be pleased to communicate it."18

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above did not violate any British laws, the royal
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From the outset, Neponset manufacturers played an important part in the American Revolution. Several of them were delegates to the Suffolk County Convention of 1774, which formulated a local declaration of grievances against the British government. Representatives were present from Boston, Roxbury, Brookline, Dedham, Dorchester, Milton and Braintree. The final session assembled at Daniel Vose's house in Milton. 19 (The house of this prominent Neponset manufacturer, while still standing, has been moved from its original Lower Mills location.)

The convention drafted a statement which flamed with defiance, going so far as to advocate forceable resistance to

^{18&}quot;Massachusetts Archives," vol. 26, p. 437.

¹⁹Teele, op. cit., pp. 424-9.

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the British. Paul Revere brought the Suffolk Resolves, as they were called, to the Continental Congress, in session in Philadelphia. The Congress ratified and published the resolutions, moves which showed the power of the radical wing of the body.²⁰

The fifteenth of the nineteen Suffolk Resolves urged the development of American industry. It read, "Under present circumstances, it is incumbent on us to encourage arts and manufactures among us, by all means in our power."

James Boies and Edward Preston were members of the fiveman committee named to implement the resolution. The following month Boies was one of the two Milton delegates to the Salem meeting of the extra-legal Provincial Congress of Deputies. 21

The defiance voiced in the Suffolk Resolves helped pave the way to armed rebellion. In 1776 British-held Boston was besieged by the Americans, led by General Washington.

James Boies played a part in the efforts to dislodge the British. The circumstances were as follows. Washington shrewdly decided to fortify Dorchester Heights, where his

²⁰ Teele, op. cit., p. 429.

²¹William Lincoln, editor, The Journals of Each Provincial Congress of Massachusetts in 1774 and 1775, Boston, 1838, pp. 7, 604.

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Boies' part in the activity was twofold. He contributed white birch trees from his land to make the fascines.

Then, at a pre-arranged time, when the bundles were moved from the Brookline depot to the site of the defences, Boies guided the large coumn of wagons on its arrival in Dorchester. 23 It was estimated that 380 teams and 5000 men took part in the construction. One local observer wrote that it was "the most work don that ever was don in in one night in New England". 24 The British commander, General Howe, ruefully reported, "The rebels have done more

²²Dorch. Hist., pp. 334-5.

²³Boies, op. cit., pp. 255-6.

²⁴ Dorch. Hist., p. 367.

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²² porch. Hist., pp. 334-f.

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in one night than my whole army would have done in a month."25 The British withdrew and Boston was liberated.

During the Revolutionary period, a continual shortage of men and materials plagued the paper mills. Contributing to the labor shortage, four apprentices in the papermaking trade enlisted in the Revolutionary Army. 26 Two prominent manufacturers, Vose and Boies, attained the rank of captain. 27

The aid of the provincial authorities was enlisted in a rag-saving campaign. One man in each town was to be appointed to take charge of the collection. The almanacs of the time vigorously supported the effort. 29

²⁵Dorch. Hist., p. 335.

^{26&}quot;Massachusetts Archives," vol. 180, p. 18.

²⁷Teele, <u>op</u>. <u>cit</u>., p. 229.

²⁸Joel Munsell, A Chronology and History of Paper and Paper-Making, 3d edition, Albany, J. Munsell, 1864, p. 26.

^{29&}quot;Early Paper Making in Massachusetts. Advertisements," New England Historical and Genealogical Register, (1872) vol. 26, no. 1, p. 84.

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²⁷Teels, or. ott., p. 229.

Paper-Manthe, 3d edition, Alvany, J. Munsell, 1854, p. 20.

^{29&}quot;Sarly Paper Making in Massachusetts. Advertisewents." Jew England Historical and Genealogical Secipuer, (1872) vol. 26, no. 1, p. 34.

The old slitting mill appeared on the stage of history for the last time, in the service of the new-born nation. Many years after the Revolution, Boies' son wrote, "The business proved profitable to himself and beneficial to the American army, and for the supplies made he received a Vote of Thanks." No record of the mill's existence after this period has been found.

³⁰ Boies, op. cit., p. 256.

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³⁰ Boles, ob. olt., p. 256.

CHAPTER III

INDUSTRY IN THE NATIONAL PERIOD

As we trace the development of the Neponset mills after the Revolution, the features of modern industry begin to emerge. This is most obvious with the introduction of steam engines and later, with the electrification of machinery. Less obvious is the change in the character of that dominant social group, the mill owners. This change was brought about by specialization and concentration.

During the eighteenth century, especially during the last quarter, entrepreneurs participated in a number of different types of mills and commercial activities. They belonged to a transitional group, linking and merging the mercantile class with the fledgling industrial capitalists. Thus, we notice that as late as 1781, James Boies was referred to, in the Suffolk Deeds, as a trader and wharfinger. Daniel Vose, in addition to being the owner of a number of mills, was actively engaged in trade.

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His store at Lower Mills was an important regional commercial center.²

Their nineteenth century successors concentrated their energies and their funds on fewer lines of endeavor.

Instead of the familiar paper, chocolate and grist mill combination, water power sites were occupied by mills devoted to either paper or chocolate making.

Specialization resulted in the emergence of a clearly defined group, the industrial capitalists. The process of concentration was to continue further, but in a different sphere. Diversity of function passed and, in time, diversity of ownership ceased. In each of the two major industries, paper and chocolate, a single firm absorbed all the mills and engrossed the entire production. The process reached its present culmination with the purchase of these firms by even larger corporations, within which the local establishments were allotted a subsidiary status.

²Vose had a small fleet of ships engaged in shipping to other ports, based on his wharf at the head of navigation on the Neponset. He owned paper, saw and grist mills, a shippard and a distillery. Teele, op. cit., pp. 363-4; Dorch. Hist., pp. 582-3.

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The Chocolate Mills

The manufacture of chocolate attracted a number of entrepreneurs. It was a fairly common practice for mill owners
to add chocolate making equipment to their original
machinery.³ In the nineteenth century the Baker firm
became pre-eminent in the industry.

After shifting from one mill-site to another, up and down the river, the firm, under Edmund Baker's direction, erected a new mill on the Dorchester side of Lower Falls in 1806. War-time prosperity was indicated by new construction undertaken in 1813. A three story stone structure, containing chocolate, grist and woolen mills, was built.

Walter Baker took over the firm, when his father resigned in 1833. Two years later the company was producing more than 750 pounds of chocolate per day. Chocolate manufacturing had outgrown the limitations of a local industry,

³Dorch. Hist., pp. 627, 629, 638.

⁴<u>Ibid</u>., pp. 605, 637-8.

^{5&}quot;Walter Baker Letter book, 1812-1828," MS, Baker Library, Harvard University, Nov. 5, 1833.

A Calendar of Walter Baker and Company, Inc. and its Times 1765-1940, New York, General Foods Corporation, 1940, p. 30.

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Times 1767-1940, New York, General Poods Corporation, 1940, p. 30,

with products restricted to a local market. Baker had outlets in other states and showed a keen awareness of the value of advertising. In a letter to his agents he wrote, "I wish you would advertise our chocolate as often as once a fortnight." At a later date he wrote, "Advertising, I conceive, at proper seasons, is the best mode of reaching both city and country traders."

This emphasis on advertising seems strangely modern. Even earlier, however, Walter Baker had stressed another modern theme, or shibboleth, the value of a brand name. During the 1820's the company made two grades, marketed under the brand names <u>Lapham's</u> and <u>Baker's</u>. The company guaranteed the superior qualities of the Baker brand.

Baker and Preston, the Dorchester chocolate makers, had no local competition in the 1830's. The concerns on the Milton side had either gone out of business or had neglected to report. 10

^{7&}lt;sub>Calendar</sub>, p. 33

⁸ Ibid.

⁹Walter Baker Letter book," Dec. 25, 1822.

¹⁰Louis McLane, <u>Documents Relative to the Manufactures</u> in the United States, House Doc. 308, 22nd Congress, 1st session, Washington, D.C., 1833, vol1, 380-1.

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Milton figured again in local chocolate production, in 1843. In that year Webb and Twombly began manufacturing at the Ware Mill, located on the site of the first paper mill. They installed two reaction or turbine water wheels, a marked improvement over the old models.

In 1845 this mill reported that it employed four workers.

Capital investment was \$7000, while annual output wwas
28,000 pounds, valued at \$4000. The two Dorchester mills
listed a total of 15 employees. Their combined investment
was \$38,000. Production was 378,901 pounds, valued at
\$50, 872. The leading position of the Baker concern
among local firms was shown by its employment of eleven
workers in 1846. Tire struck the Baker mill in 1848.

Recovery was rapid, for, while the 1849 tax assessors put
a valuation of \$6,000 on the Baker property, by 1850 the
figure was \$10,500. 14

llDorch. Hist., p. 639; Calendar, p. 32. The variety of products made at the Baker mill in 1843 is shown by the following list: chocolate, cocoa and chocolate paste, cocoa shells and prepared cocoa. Ibid., p. 36.

¹²John G. Palfrey, Statistics of the Condition and Products of Certain Branches of Industry in Massachusetts, 1845, Boston, 1846, pp. 249, 255.

¹³ Calendar, p. 39.

¹⁴Dorch. Hist., p. 638; Dorchester, Mass., The Taxable Valuation of the Polls and Estates..., Boston, 1869, pp. 5, 6.

Milton figured again in local absorber production, in 1845.

In that year Webb and Twombly began manufacturing at the ware Mill, located on the site of the first paper mill.

They installed two remotion or turbine water wheels, amarked inprovement over the old models.

In 1845 this will reported that it employed four workers.

Ospital investment as 17000, while annual output was
25,000 pounds, valued at 34000. The two Dorchester mills
listed total of 15 employees. Their combined investment
was 430,000. Production was 378,001 pounds, valued at
150, 872.12 The leading position of the Baser concern
among local firms was shown by its employment of elevan
workers in 1845.13 Fire struck the Baser mill in 1848.
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The advent of Henry L. Pierce as manager of the Baker firm ushered in a period of accelerated expansion. Interested in more than business, Pierce was a man of pronounced political convictions. In 1848 he left the Democrats and joined the Free Soil Party. His heterodoxy antagonized Walter Baker, under whom he worked as clerk. Because of this disagreement, Pierce left Dorchester and went to the Middle West, to work on a newspaper. He was persuaded to return, and was promoted to head of the counting room. In 1854 Pierce took the responsibility of the business on his own shoulders. He was given a two year lease of the chocolate business, an arrangement which lasted for decades. 15

In 1860 Pierce bought the neighboring Preston mill. This was a major step in the company's absorption of the entire Neponset chocolate industry. In 1868 important technological advances were made. A steam engine was installed, to supplement the none-too-dependable water power. Facilities for cooling chocolate were provided, allowing the first summer-time production in over a century. 16

¹⁵ Professional and Industrial History of Suffolk County, Mass., The Boston History Company, Boston, 1894, vol. 2, pp. 560-6; Calendar, p. 45.

^{16&}lt;sub>Calendar</sub>, pp. 46-9.

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¹⁵professional and Industrial History of Suffolk County, Mass. The Boston History Company, Boston, 1894, vol. 2, pp. 560-6; Celendur, p. 45.

¹⁶ Calendar, pp. 46-9.

By 1875 Baker's employed 95 workers. Two years later a new mill, named after Pierce, was built. The concentration of all the local chocolate mills under one management was effected in 1881 with the acquisition of the Webb mill. This was followed, in three years, by the construction of the Adams Street mill. In 1884 Pierce came into full possession of the company. 17

Pierce died in 1896. In his 42 years with the company, the business had expanded forty-fold. The following year the firm, incorporated as Walter Baker and Company, Ltd., was purchased by a syndicate of Boston capitalists. The purchase price, it was rumored, was \$4,750,000. Under the new management expansion was not halted. The Eagle Mill was purchased from Tileston and Hollingsworth and converted fro paper to chocolate making. In 1927 the corporation passed into the ownership of General Foods and became a division of that organization. 18

A review of the technological changes at Baker's shows the

¹⁷ Calendar, pp. 51-3.

¹⁸ Ibid., pp. 46-8, 55, 57, 62. The impersonality of the corporate form is in sharp contrast to conditions prevailing a century previously. Thus, in the 1820's Baker and Preston travelled to Salem to inspect cocoa beans imported from Surinam and Cayenne. Their purchases were shipped by water, up the Neponset, to Preston's wharf. "Walter Baker Letter book," Dec. 25, 1822.

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gradual supplanting of water power. In 1868 a major advance was scored with the installation of a steam engine. By 1905 four steam engines were in use. The era of electricity was then ushered in. In 1906 two generators, driven by three boilers, were installed. Power was furnished for electric lights and motors in all the mills. The river's energy was put to a new use. Hydro-electric generators were put into commission at the Webb and Eagle Mills. 19

The Paper Industry

Hard-pressed by shortages of man-power and materials, nevertheless, the paper industry persisted along the Neponset during the Revolutionary War. A French officer, Baron Cromot du Bourg, visited the region in 1781, entering his impressions in his diary. He wrote, "In the morning, before leaving Boston, I went five miles from the twon to see a place which has been described to me as interesting. This is a little town called Miltown Milton, where there is a paper factory of considerable extent and two chocolate mills. The river which moves them forms above a sort of cascade which is quite pretty." 20

^{19 &}lt;u>Calendar</u>, pp. 58-60.

Baron Cromot du Bourg, "Diary of a French Officer, Aid to Rochambeau," Magazine of American History, vol. 4, p. 214, (March 1880).

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Some years later another Frenchman, a noted scientist, referred to the difficulty of obtaining rags. St. John de Crevecoeur sent a letter to Governor Bowdoin, in 1787, enclosing some samples of bark paper. He wrote, "I wish these samples may urge your paper workers at Milton to make some trials, which, in a country where rags are so scarce, cannot but be very important, either for pasteboard, sheathing of vessels, wrapping of surgaretc. "21

It is interesting to note that both these writers omitted any mention of a paper mill on the Dorchester side of the river. As has been pointed out, the Sumner mill, in Dorchester, was in existence around 1773. It is true, however, that, in mills of all types, Milton held the industrial leadership on the Neponset, up to the last decade of the eighteenth century. As late as 1791, the town on the south side of the river listed eight industrial establishments, compared with six for Dorchester. The

Franklin B. Sanborn, "St. John de Crevecoeur, the American Farmer," Proceedings of the Massachusetts Historical Society, Second Series, (1906,1907) vol. 20, p. 68.

^{22&}lt;sub>Dorch. Hist.</sub>, p. 628.

²³ Massachusetts General Court, Valuation Committee, "Aggregates of Valuation, 1791," MS, Massachusetts State Library.

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²³ Massachusetts General Court, Valuation Committee, "Aggragates of Valuation, 1991," MS, Massachusetts State

situation soon changed, in favor of thelatter town. Two more paper mills were erected in Dorchester in the 1790's.²³
A report published in 1804 enumerated ten mills of all kinds on the north bank of the Neponset, as against six on the Milton side.²⁵

Returning to the paper industry, the writer of the 1804 report stated that each town had three paper mills. 26
While the number of paper mills in each town remained equal, by 1845 Dorchester had outstripped Milton in production. In that year the value of paper manufactured in Milton was only two-thrds that made in the neighboring town. 27

Around the beginning of the nineteenth century paper mills were simple, unpretentious structures. They were often nothing more than large sheds. In Massachusetts the average paper mill was equipped with two vats and one or two rag

^{24 &}lt;u>Dorch. Hist.</u>, pp. 603, 631.

Thaddeus M. Harris, "Chronological and Topographical Account of Dorchester," <u>Collections of the Massachusetts</u>
<u>Historical Society</u>, Series 1, vol. 9, p. 165 (1804, reprinted 1857(.

²⁶ Ibid.

²⁷ Palfrey, op. cit., pp. 248, 255.

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On an annual basis, 2000 to 3000 reams were produced.

Various grades of writing, printing, wrapping and wall paper were manufactured.²⁸

As each vat used around 115 pounds of ragx a day, the problem of supply was a difficult one. 29 Rag peddlers scoured the cities and travelled into rural areas. They offered paper, pens and school books in exchange for rags. 30 The demand exceeded the domestic supply and it was necessary to import rags duty-free from foreign countries. 31

Byron Weston, "History of Paper Making in Berkshire County," Collections of the Berkshire Historical and Scientific Society, vol. 2, part 2, (1895) pp. 4,9,20; Isaiah Thomas, The History of Printing in America, Albany, Joel Munsell, 1874, vol. 1, pp. 24-6; John L. Bishop, A History of American Manufactures from 1608 to 1860, Philadelphia, Edward Young and Co., 1864, vol. 1, p. 198.

²⁹ John Savels Jr., "Journal Daily kept in William Sumners Paper Mill in Dorchester, "MS, Dard Hunter Paper Museum, Massachusetts Institute of Technology.

³⁰ Weston, op. cit., p. 5.

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grinding machines. Ten men and ten boys or girls were employed. The mill usually required a capital investment of \$10,000. Output was at the rate of ten reams a day. On an annual basis, 2000 to 3000 reams were produced. Various grades of writing, printing, wrapping and wall paper were manufactured. 28

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Water power was used in the early paper mills only to drive rag grinding machines, or "engines", as they were called.

A major advance was scored with the invention of the Foudrinier machine. This device mechanized the other papermaking processes. The first use of a paper machine of this type in the local mills occurred in 1827, at the Sumner mill. In the same year Isaac Sanderson followed suit, at his Milton mill. In 1829, Tileston and hollingsworth replaced the old vats in the mill which they leased from Baker with a Foudrinier. When they moved up-river to the Sumner site, the partners installed four engines and a Foudrinier. Similar equipment went into another mill which they erected nearby. 32

Continuing their steady expansion, Tileston and Hollingswoth erected the Eagle Mill, around 1863. Their plant
boasted a 76-inch Foudrinier and beaters (grinding
machines) of enlarged capacity. The Eagle Mill produced
the Tileston and Hollingsworth speciality, fine book paper.
In addition, blue wrapping paper was made for Walter Baker
chocolate. The Sumner Mill produced lithograph, chart and
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secret ballot. The firm began the installation of steam

³² Dorch. Hist., pp. 630, 616, 607, 631.

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Scorch, Hist., pp. 630, 616, 507, 631.

power in 1879, overcoming the hindrances of summer drought and spring floods. In 1890 the Sumner Mill was enlarged and re-titled the Hyde Park Mill. A 90-inch Foudrinier added greatly to the productive facilities. 33

The company concentrated its activities at this up-river site. The other plants were sold. However, the decrease in the number of plants did not result in a decline of output. In 1920 the Hyde Park Mill produced more than all the Tileston and Hoblingsworth plants turned out in 1900.34

A partial inventory of the present-day facilities of the mill shows the vast advances in productive capacity since the beginning of the nineteenth century. Then, the typical mill had two rag "engines". 35 Tileston and Hollingsworth now have one 1500-pound capacity beater, two 2000-pound beaters and five Jordans (machines for more refined maceration). The two vats of the earlier period have

³³William Bond Wheelwright, "New England's Pioneer Paper Makers," MS, Massachusetts Historical Society, pp. 17-22.

^{34&}lt;u>Ibid.</u>, p. 22.

^{35&}lt;sub>Clark</sub>, op. cit., vol. 1, p. 168.

³⁶ Lockwood's Directory of the Paper and Allied Trades, Lockwood Trade Journal Co., New York, 1950, p. 150.

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³⁵ clark, og. oit., vol. 1, p. 168.

³⁶ Locamood's Directory of the Paper and Alited Trades, Locamood Trade Journal Co., New York, 1950, p. 150.

metamorphosed into three Foudriniers, of 78-inch, 104-inch and 122-inch size.³⁶ Production in the olden days used to average under 250 pounds per working day of fifteen hours.³⁷ At present the mill has a potential output of 145,000 pounds per 24 hours.³⁸

The trend towards concentration of ownership marked the history of the local industry. By 1828 Tileston and Hollingsworth had purchased the two Upper Mills plants owned by Amasa Fuller and Jeremiah Smith Boies. In 1836 the Sumner Mill was acquired. With the leasing, in 1843, of the Walter Baker paper mill, the partners completely controlled local production. The extent of Tileston and Hollingsworth holdings in 1871 is indicated in Amor Hollingsworth's will, filed in that year. The following were listed: Eagle Mill, Fuller Mill, McLean

³⁶ Lockwood's Directory of the Paper and Allied Trades, New York, Lockwood Trade Journal Co., 1950, p. 150.

³⁷clark, op. cit., vol. 1, p. 168

³⁸Lockwood's Directory, p. 150. The firm produces the following types of paper: Machine finish, English finish, antique, super calendered book, offset, cover, text, sulphite bond, ledger, writing, papeterie, Bristol, index Bristol, Bible, envelope and coating stock. Ibid.

³⁹Dorch. Hist., pp. 607, 622, 625, 630, 631.

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Mill and Sumner Mill. 40 In 1889 the partners incorporated, with a declared capitalization of \$500,000. 41 At the present time, paralleling the history of the Baker mills, the firm is a wholly owned subsidiary of a large paper manufacturing concern, the Penobscot Chemical Fibre Corporation. 42

The Textile Industry

The development of the textile industry along the Meponset was erratic, spurred by war and destroyed by fire. As we have seen, the earliest form of the textile industry to use water power was the fulling mill. In 1803 Dorchester contained two of these mills, while Milton had none. 43 The importance of these fulling mills in the comparatively urban Neponset region is a matter of conjecture. For the country as a whole, Gallatin estimated in 1810 that two-thirds of the clothing worn in the United States was of household manufacture. 44 The fulling mill, as has been

⁴⁰ Amor Hollingsworth, "Will of Amor Hollingsworth," MS, Norfolk County, Registry of Probate, no. 9802.

⁴¹Wheelwright, op. cit., p. 20.

⁴²Information supplied by a representative of T&H.

⁴³Harris, op. cit., p. 165.

⁴⁴Albert Gallatin, "Report on Manufactures, April 1810," American State Papers, Finance, Washington, D.C., 1832, vol. 2, p. 427.

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noted previously, processed home-woven cloth, converting it into a form suitable for making into clothing.

Lacking statistics derived from local mills, it is necessary to fall back on Gallatin's description of a New Hampshire fulling mill in the first decade of the nineteenth century. The cost of the mill and its amachinery was \$1500. Four employees made up the labor force. They were paid \$20 per month. It is seen from this example that fulling mills were small scale enterprises. 45

The War of 1812 and the embargoes which preceded it shut off supplies of English cloth and provided an opportunity for Americans to enter the field of textile manufacturing. Aided by a \$3000 loan from his father, Edmund Baker set up a small woolen mill. He purchased wool, cotton, dyes and machinery. As the old fulling mill had been torn down, 48 and fulling was a necessary step in cloth making, it may be assumed that the enterprise also included a fulling mill. The other processes, spinning and weaving, were

⁴⁵Gallatin, op. cit., p. 435.

^{46&}quot;Walter Baker Letter book," January 1, 1814.

^{47 &}lt;u>Ibid.</u>, December 10, 1813; March, 1814.

⁴⁸ Dorch. Hist., pp. 605-6.

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Baker started with five looms and in a year had expanded to twelve. He paid three cents per pound for carding and 25 cents per yard for weaving. His woolen mill produced broadcloth and satinet. His satinet sold for one dollar per yard, while black broadcloth was priced at five dollars per yard. 49

The end of the war loosed a flood of imported cloth. Warborn industries were hurt by this competition. Baker was forced to cut his prices, instructing his representative to store goods if he could not find purchasers. Ohis reverses forced Baker to dissolve his business. He went to Natchez, where he taught school. The happy ending to this story, of course, was his return to Dorchester and his entrance into his father's chocolate business, where he scored the success that had been denied him earlier.

⁴⁹ Calendar, pp. 24-6.

^{50 &}quot;Walter Baker Letter book," January 31, 1815.

⁵¹ Calendar, p. 26. The facilities of the mill continued to be used for carding and spinning wool, until the needs of the chocolate business crowded out the enterprise. Dorch. Hist., p. 606; Commercial Directory, Philadelphia, J.C. Kayser and Col, 1823, p. 117.

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Scalendar, op. 24-6.

⁵⁰mwelter Baker Letter book," January 31, 1815.

Floring, p. 26. The facilities of the mill dontinued to be used for carding and spinning wool, until the needs of the chocolate business crowded out the enterprise. Dorch. Hist., p. 606; Commercial Directory, Philadelphia, J.C. Mayser and Col, 1623, p. 117.

It is possible that Walter Baker might have been encouraged in his plans for a woolen mill by the formation of the Dorchester Cotton and Iron Factory in 1811. This, the first industrial corporation on the Neponset, was a large scale undertaking. The charter granted by the General Court permitted the firm to have real estate up to a value of \$50,000 and personal property up to \$100,000. A mill privilege was bought from Jeremiah Smith Boies, who was made agent of the corporation. A cotton spinning mill was erected and it was anticipated that iron turning machinery would be added at a later date. 53

As was typical of cotton mills at that time, a form of cottage industry was utilized to perform some of the processes. The mill gave out cotton, to be cleaned of seeds at home. The mill then carded and spun the cotton. Water power was used for the spinning process. The thread was then "put out" to workers, who wove it into cloth at home. Pay was on a piecework basis, at the rate of eight cents per yard. 54

⁵²Acts, 1811, ch. 1.

^{53&}lt;u>Dorch. Hist.</u>, p. 632.

^{54 &}lt;u>Ibid</u>. When the domestic weavers of Dorchester were replaced by the power loom is not known. However, around 1820, the power loom began to play a dominant role in the New England textile industry. Caroline F. Ware, <u>The Early New England Cotton Manufacture</u>, Boston, Houghton, Mifflin, 1931, p. 50.

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The firm grew steadily. In 1815 another mill was added, on a downstream site. In 1826 operations were centralized at the lower mill and the original structure was abandoned. 55 In 1831 the company owned two mills, 4500 spindles and 56 127 looms.

The following year another entrant into the field appeared. a 1000-spindle mill was erected at the Sumner dam. ⁵⁷ The cotton mills in Dorchester now employed 222 men, women and children. ⁵⁸ Four years later, in 1837, they reported a total of 280 workers, most of them women. ⁵⁹ Disaster struck the new mill in the panic year of 1837. Not economic distress, but the old nemesis, fire, destroyed the newcomer. ⁶⁰ The same fate lay in wait for its competitor.

A possible consequence of the depression, in 1840 the number of looms at the Dorchester Cotton and Iron Factory was

^{55&}lt;sub>Dorch. Hist.</sub>, p. 633.

⁵⁶ Massachusetts General Court, Valuation Committee, "Report, 1831," MS, Massachusetts State Library.

^{57&}lt;sub>McLane</sub>, op. cit., vol. 1, pp. 380-1.

⁵⁸Dorch. Hist., p. 630.

⁵⁹ John P. Bigelow, Statistical Tables: Exhibiting the Conditions and Products of Certain Branches of Industry in Massachusetts...1837, Boston, 1838, p. 123.

⁶⁰ Dorch, Hist., p. 630.

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reduced to 78.61 Evidence of economic recovery was shown in 1846, when a steam engine was installed.62 In 1850 a spurt forward was noted. The company listed 5000 spindles and 160 looms.63 By 1855 the number of spindles had increased to 5376.64 The firm was encouraged to expand, "foundations were laid, water-wheels of great power were contracted for, and other arrangements were made for a large addition to their water-works."65

Unfortunately, these plans were doomed to fail. A new dispatch in a contemporary newspaper provides the details. 66

About half past five o'clock, on Thursday evening, a fire broke out in the upper room of the large four story brick building known as the Dorchester Cotton and Iron Factory...The operatives, about 200 in number, escaped from the building...two or three fire engines got to work...unfortunately the coupling of the force pump gave out, and that source of supply failed...

⁶¹ Massachusetts General Court, House of Representatives, Documents...1841, Boston, 1841, Reports 3, 12.

^{62&}lt;u>Dorch. Hist.</u>, p. 632.

⁶³ Massachusetts General Court, Valuation Committee, "Report, 1850," MS, Massachusetts State Library, p. 380.

⁶⁴Francis De Witt, Statistical Information Relating to Certain Branches of Industry...1855, Boston, 1856, p. 380.

⁶⁵ Dorch, Hist., p. 634.

⁶⁶ Boston Daily Advertiser, January 13, 1855.

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⁶³ Massachusetts General Court, Valuation Committee, "Report, 1850," 13, Massachusetts State Library, p. 180.

⁶⁴ Francis De Witt, Statistical Information Relating to Certain Branches of industry...1855, Boston, 1656, p. 380.

⁶⁵Dorch. Hist., p. 634.

⁶⁶ Boston Dally advertiser, January 13, 1855.

The building was totally destroyed. A steam engine valued at \$10,000 was destroyed with the other machinery.

The estimated loss was between \$125,000 and \$150,000 but the company was insured for only \$50,000.⁶⁷ The discouraged stockholders voted not to rebuild the factory. Their decision was influenced by the depressed state of the cotton textile industry.⁶⁸ Thus the promise of a third major industry on the Neponset faded from the scene.

Miscellaneous Mills

In the various combinations of mills that were found along the river, the grist mill was nearly always present. 69

At the beginning of the nineteenth century, a survey showed that Neponset power ran four grist mills: three in Dorchester and one in Milton. 70 In 1831 the figures showed a slight increase. Five were listed, Milton still charged

⁶⁷ Boston Daily Advertiser, January 13, 1855.

^{68&}quot;Norfolk Records, "MS, vol. 236, p. 210.

⁶⁹ Dorch. Hist., pp. 629, 631; Calendar, p. 24.

^{70&}lt;sub>Harris</sub>, op. cit., pp. 164-5.

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⁷⁰ Harris, op. ett., pp. 164-5.

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The roster of Neponset industries includes a number of lesser mills. Saw mills were few in number. Generally, one could be found on each bank. Another pioneer achievement could be cited for the Neponset region in 1817, when, for the first time in America, veneers were sawed by power tools. 77

⁷¹Massachusetts General Court, Valuation Committee,
"Report, 1831," MS, Massachusetts State Library.

^{72&}lt;sub>Massachusetts</sub> General Court, House of Representatives, <u>Documents...1841</u>, "Valuation Report," Nos. 5, 51.

^{73&}lt;sub>Calendar</sub>, pp. 39,40.

⁷⁴ Massachusetts General Court, Valuation Committee, "Report, 1850," MS, pp. 249, 255.

⁷⁵ Dorchester and Quincy Directory 1868-9, Boston, Dudley and Greenough, 1869, pp. 32, 246.

⁷⁶ Dorch, Hist., pp. 619, 628-9; Harris, op. cit., pp. 164-5; Massachusetts General Court, Valuation Committee, "Report, 1831," MS; Documents...1841, no. 5, 51.

^{77&}lt;sub>Dorch. Hist.</sub>, p. 619.

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⁷⁶ Doron, Hist., pp. 619, 628-9; Harris, op. elt., pp. 164-5; Massachusetts General Court, Valuation Countitee, Report, 1631, "45; Documents...1841, no. 5, 51.

^{??} Doroh. Hist., p. 619.

Leaping ahead to the present century, we find that, until 1938, the Neponset supplied power to drive machinery and generating equipment for the Curtis Lumber Company, located on the Milton side of Mattapan Square. In that year the company was purchased by the Diamond Match Company. The old trench, which had diverted water from the river for over two centuries, was later filled in, by arrangement with the Metropolitan District Commission. The company of the present that the Metropolitan District Commission.

A variety of products could be credited to the minor mills along the Neponset. Among them starch was the most important. During the peak year, 1855, the Liversidge starch plant employed 25 workers and produced \$64,000 worth of goods. 80 Among the other products made in local mills were drugs, 81

⁷⁸ John P. Ross, "Historical Background of the Diamond Match Company Property at Milton, Massachusetts," MS, Massachusetts Historical Society.

⁷⁹ Conversation with Mr. Ross.

⁸⁰ Dorch. Hist., p. 634; McLane, op. cit., pp. 380-1; Palfrey, op. cit., p. 248; Dorchester, Mass., The Taxable Valuation of the Polls and Estates, 1849, p. 55, ... 1861, pp. 51-2, ... 1865, p. 58, ... 1869, p. 137; De Witt, op. cit., p. 380; Oliver Warner, Statistical Information Relating to Certain Branches of Industry in Massachusetts, ... 1865, Boston, 1866, p. 437.

⁸¹ Dorch. Hist, pp. 619-620.

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Sporoh, Hist, pp. 619-620.

spices, 82 and rubber.83

At present the only noticeable industrial activity is to be found at the two boundaries of our survey: The Walter Baker mills at Lower Mills and the Tileston and Hollingsworth plant on River Street.

⁸²Dorchester, Mass., The Taxable Valuation of the Polls and Estates, 1849, p. 71, ... 1865, p. 72, ... 1869, p. 78.

^{83&}lt;sub>Calendar</sub>, pp. 46,47.

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⁸³ dalendar, pp. 46,47.

CHAPTER IV

LABOR IN THE NEPONSET MILLS

Of all the phases of local history, the labor problem has received the least attention from antiquarians and historians. While they have left an ample record of the achievements of the industrialists, little mention is made of the workers whose skill and energy was also a vital factor in the success of the various enterprises. The material for a history of labor in the local mills is scant, scattered and, too often, consists largely of statistics.

The chronic shortage of labor during the colonial period has been noted. The difficulty was worsened with the onset of the Revolution. Boies and McLean lost four apprentices, who enlisted in the army. The harassed employers petitioned the Provincial Congress in 1775, requesting the release of their former workers. The four apprentices were said to "have attained so great a knowledge in the Art of Paper making that their attendance on that business is absolutely necessary to its being carried on". Their discharge was requested to prevent the shutdown of the mills. 3

¹See above, pp. 17, 21, 22, 24.

^{2&}quot;Massachusetts Archives," vol. 180, p. 18.

^{3&}lt;sub>Ibid</sub>.

The provincial authorities maintained their long-standing policy of friendliness toward the millowners. They took into consideration "the small number of Persons withing this colony who carry on the manufacturing of Paper and the Great Demand and Necessity of that article". They ordered the release of the apprentices, "to serve the Publick in Carrying on the manufacturing of Paper at the ...paper works at Milton", 4

The committee then had a change of heart. After a lengthy debate, they announced that Boies and McLean had been allowed to withdraw their petition. The Provincial Congress made partial compensation for this rebuff. A paper-maker of undisclosed nationality was held prisoner at Worcester. The Congress ordered that the incarcerated artisan was to be put to work at Boies' mill.

A description of workers in paper mills around 1800 touches on some of their working conditions.

The papermakers of olden times could be distinguished from other classes of workmen by their big red hands,

^{4&}quot;Massachusetts Archives," vol. 180, p. 18.

⁵Lincoln, op. cit., p. 229.

^{6&}lt;u>Ibid.</u>, p. 549.

Weston, op. cit., p. 19.

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Andassachusetus Archives," vol. 183, p. 10.

bincom, on cig., p. 229.

⁶¹b1d., p. 549.

Weston, pp. 911., p. 19.

the result of dipping their hands continually into the warm water and pulp, and by their stooping, round shoulders, caused by constantly bending over the vat... The men of the mills...began work early in the morning, stopping for breakfast, and particularly taking a rest at "grog time", about 11 o'clock in the forenoon. A day's work was "20 post" six reams, approximately 3000 sheets which was generally finished early in the afternoon and then resort was had to the village tavern.

The journal kept by John Savels at the Sumner Mill provides a mine of information on the local papermaking trade at the close of the eighteenth century. Young Savels was employed by his uncle, William Sumner, until he came of age. He then went to work for Tileston and Hollingsworth at Lower Falls.

In 1799, at the start of the journal, five men were employed at the mill. As business improved, the number reached a peak of thirteen. At the close of the journal, in 1800, the employees totalled ten. They worked six days a week, resting on Sunday. Only three holidays are mentioned:

National Fast Day, Thanksgiving and Christmas. The mill did not close on July 4. On that day, in 1799, the journalist commented, "Independent anniversary. 23 Years of age is the united States".9

William Goold, "Early Papermills of New England,"

New England Historical and Genealogical Register, vol. 29,
(1875) p. 163.

^{9&}quot;Savels Journal".

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Vatmen at the Sumner Mill were paid \$2.00 to \$2.77 for a week's work. The engineer, who ran the rag grinding machine, received a weekly salary of \$4.33. By comparison, Berkshire County vatmen, during the decade 1790-1800, were paid \$3.50. The difference may be attributed to the relative scarcity of labor in the western part of the state.

We now turn our attention to the young people who worked in the Neponset mills. It has been noted that the paper industry employed a number of boys and young men during colonial and revolutionary times. Advancing into the national period, we are informed that, during the 1790's, apprentices in the papermaking trade had an opportunity to attend an evening school in Dorchester. Whether or not the school was under public auspices is not disclosed.

The problem of education, not hours of labor or working conditions, led to the first investigation of child labor by Massachusetts legislators. The rapidly growing factory system was attended by the employment of large numbers of children. Fears were expressed that these young workers,

^{10&}quot;Savels Journal".

¹¹ Clark, op. cit., vol. 1, p. 394.

¹² Dorch. Hist., p. 540

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if deprived of a chance to get an education, might grow up in ignorance. The Massachusetts Senate appointed a committee in 1825 to gather information from town officials on the number of children under sixteen employed by manufacturing corporations, their working hours and their educational opportunities. The investigation was limited to corporations, so that partnerships and individual proprietorships escaped scrutiny. 13

At that time, the only incorporated manufacturing concern on the Neponset was the Dorchester Cotton and Iron Facotry. The Dorchester selectmen wrote that the eight boys and thirty girls employed by the mill worked twelve hours a day and attended school for three months each year. The report continued

They are, generally, children belonging to familys sic who are tenants of the corporation, - near which are two good Town schools, and the parents, usually take them from work and send them to the above schools, as nigh as we can ascertain, about three months in a year on an average. Their [sic] is also a Sunday School which most of them attend.

The legislative committee evidently considered the Dorchester situation commendable. In their abstract of their findings

¹³Charles E. Persons, "The Early History of Factory Legislation in Massachusetts," in Susan M. Kingsbury, editor, Labor Laws and Their Enforcement, New York, Longmans, Green & Co., 1911, pp. 3-5.

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In 1836 the education of juvenile factory operatives was the subject of an investigation by a House committee. This time legislative action was recommended and the propoxal was accepted by the General Court. A law was enacted requiring a minimum attendance of three months at school for children employed by an incorporated manufacturing establishment. The will be noted that the Dorchester selectmen had reported in 1825 that the children covered by their survey were provided with three months of schooling. 18

Dorchester, and most of the other towns, reported twelve hours as the length of the work-day for children. 19

Persons, op. cit., p. 8.

^{17&}lt;u>Ibid.</u>, pp. 17-19.

^{18&}quot;Massachusetts Archives, Senate Document 8074."

¹⁹ Persons, op. cit., p. 6.

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Persons, in his analysis of the returns, interprets this figure as representing the average number of hours worked per day throughout the year. He suggests that the following report from a mill agent in Troy is typical.

In the winter season these persons begin to work as soon as they can see in the morning and work until half past seven in the evening, and are allowed half an hour for breakfast and half an hour for dinner.

In the summer season they begin to work at sunrise in the morning and work until sunset at night, are allowed half an hour for breakfast, and three quarters of an hour for dinner, and take their supper in winter and summer after they have done working in the evening.

The first law regulating hours of child labor was passed in 1842. It provided that children under twelve should not work more than ten hours a day. 22

There are no statistics that reveal the exact proportion of child laborers in the Dorchester Cotton and Iron Factory. An 1833 report lists the following employees: 26 men, 12 boys not over sixteen years of age, and 184 women and girls. 23 The last category was not broken down into its components. The report contains the only available

²⁰ Persons, op. cit., p. 6.

^{21&}lt;u>Ibid</u>., p. 7.

^{22&}lt;u>Ibid.</u>, p. 20.

^{23&}lt;sub>McLane, op. cit.</sub>, vol. 1, pp. 380-1.

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²³ sclane, on. oit., vol. 1, pp. 380-1.

reference to the wage scale for child workers. Boys were paid fifty cents a day, women and girls, forty-four cents, while men received one dollar per day.²⁴

Women workers, judging from the 1833 report, made up the largest component of the labor force of the local cotton textile industry. The figures for 1837 are comparable:

60 men and 220 women. For these two years, at least, approximately 80% of the operatives were women.

While the cotton textile industry ranked first in employment of women, the other major industries, paper and chocolate, also relied, although to a lesser extent, on female labor. The 1833 report stated that the Dorchester paper mills employed 17 men at one dollar a day, 14 women and girls, at 47 cents a day. Workers fared somewhat better at the Milton mills. There, a total of 21 men received \$1.125 per day, while 11 women and girls got 50 cents a day.

²⁴McLane, op. cit., vol. 1, pp. 380-1.

²⁵ Bigelow, op. cit., p. 123.

²⁶McLane, op. cit., pp. 380-1, 398-9.

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²⁶ deLame, op. eit., pp. 380-1, 398-9.

The proportion of women employees in Massachusetts paper mills gradually declined. In 1875 the percentage was 50.71, in 1885, 44.69.²⁹ At the present time only 38 of the 312 employees of the Tileston and Hollingsworth mill are women.³⁰

In 1833 the Dorchester chocolate mills were small-scale enterprises, employing only nine workers in all. Only one woman was listed. She received fifty cents a day, contrasting with the dollar per day rate for men. In 1868 the Walter Baker Company employed 48 workers, but the number of women is not given. Men were paid up to two dollars a day, while the maximum for women was 83 cents. In 1875 the company employed 95 workers, 42 of them women. Again, the average pay is not given, but men received a maximum of three dollars a day, while the maximum rate for women was one dollar. 32

Trade union organization of the chocolate and paper mills is of recent date. In 1938 Federal Labor Union No. 21243 was established at Walter Baker's. 33 Another affiliate

^{29&}lt;sub>Massachusetts</sub>, Bureau of Statistics of Labor, Sixteenth Annual Report, 1885, part VII, p. 548.

³⁰ Conversation with representative of T&H.

³¹ McLane, op. cit., pp. 380-1.

^{32&}lt;u>Calendar</u>, p. 49, 51. 33<u>Ibid.</u>, p. 65.

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CHAPTER V

THE PAPER INDUSTRY: GOVERNMENTAL AID

AND

TRADE ASSOCIATIONS

During the colonial period paper manufacturers along the Neponset turned to the provincial government for assistance. After the revolution the importance of state aid lessened and more reliance was placed on help from the federal government. In the sole instance of intervention by Massachusetts lawmkers, they decided not to tap the public treasury, but to solicit contributions from private purses via a lottery. As our emphasis is on events where local industrialists played a prominent role, our survey will extend only as far as the Civil War.

After fire had destroyed Hugh McLean's paper mill, the General Court decided, in 1781, that the public welfare would be served by raising £1200 by a lottery, the proceeds to go toward rebuilding the mill. The act lauded the "Ingenuity and Industry" of McLean, as a result of which "great Benefit has accrued to this Commonwealth".1

¹Acts, 1781, ch. 39.

OHAPTER . V

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Some local manufacturers found Massachusetts, the state, less lenient than Massachusetts, the province. It will be recalled that the colonial authorities had allowed repeated extensions of the £400 loan made to Boies and Clarke in 1764. After twenty-four years had elapsed, the General Court grew impatient. A resolve passed in 1788 termed Boies and Clarke, the recipients of the loan, and Hugh McLean and others, the guarantors, public defaulters. The Treasurer of the Commonwealth was ordered to demand payment.

Perhaps the lawmakers were prompted to take this drastic step by the knowledge that, a few months earlier, Boies and McLean had paid more than the £400 in question for some property along the Neponset. In any event, Boies reached an agreement with the disgruntled authorities. He was to pay the debt in quarterly installments of £25. Cash payment was not required. Instead, he was allowed to give the equivalent value of "good printing paper...to the Printer who now is or may hereafter be employed to Print

²See above, pp. 23,29.

^{3&}lt;u>Resolves</u>, 1788, ch. 52.

^{4&}quot;Suffolk Deeds," vol. 163, pp. 63-4.

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³ Resolves, 1788, cb. 52.

^{4&}quot;Suffolk Deeds," vol. 163, op. 63-4.

the Acts and Resolves of Government". In 1791 the state treasurer declared that payment in full had been received.

From the commencement of government under the Constitution the federal government aided the paper industry. The preamble of the first tariff law, the Act of July 4, 1789, declared that the aims of the maesure were the support of the government, payment of the national debt, and the "encouragement and protection of manufactures". 7

Paper products were placed on the enumerated list and an ad valorem duty of 7½% was assessed. The items specified were blank books, paper hangings, pasteboard, and writing, printing and wrapping paper. Added aid was given to paper manufacturers with the placing of rag imports on the free list. 8

It is natural to assume that paper manufacturers would join together to bring their influence to bear on the course of tariff legislation. Oddly enough, the first

⁵Resolves, 1788, ch. 115A.

^{6&}quot;Suffolk Deeds," vol. 101, p. 110.

⁷Isaac Lippincott, "Tariff," in James Truslow Adams, editor, <u>Dictionary of American History</u>, Charles Scribners Sons, New York, 1940, vol. 5, pp. 221-2.

⁸Weeks, op. cit., pp. 102-3.

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organization in the American paper industry did not take up the tariff question. Local problems, chiefly the regulation of wages and prices, monopolized the attention of the participants.

Neponset paper mill owners participated in this pioneer trade association. Jeremiah Smith Boies served as clerk of the meetings, held in Boston on April 15 and 16, 1795. Richard Clark and Michael McCarney also attended. The manufacturers agreed to abide by a set of rules that would govern their practices. Their code seems surprisingly modern, with its provision for a price ceiling for wages and raw materials and a minimum price on finished products. Maximum prices for rags, maximum wages for labor and minimum prices for paper protected the signers from bidding up the cost of raw materials and labor and forcing down the price of finished goods. 9

Committees were appointed to plan further measures for their mutual benefit. One group was to investigate a proposal for a warehouse, where paper could be deposited by a manufacturer. In exchange he would receive part of the

Douglas C. McMurtrie, The First American Paper Trade Agreement, reprinted from Pulp and Paper Magazine, (Jan.24, 1929) n.p.

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value of his paper in cash. Another project was the formulation of a code of rules to be observed in all mills. 10

Perhaps the lack of concern over foreign competition and the emphasis on domestic competition was a sign of the secure position of American paper manufacturers. Alexander Hamilton had written in 1791, "Mahufactories of paper are among those which are arrived at the greatest maturity in the United States, and are most adequate to national supply...Nothing material seems wanting to the further success of this valuable branch, which is already protected by a competent duty on simliar imported articles."

Up to 1807, the period of Napoleonic wars was one of general prosperity. While producers of food and raw materials and the shippers who transported these goods reaped a golden harvest, the rest of the country shared in their good fortune. The Embargo Act of 1807, barring American vessels from foreign ports, drastically changed the

¹⁰ McMurtrie, op. cit.

¹¹ Alexander Hamilton, "Report on Manufactures, December 1791," American State Papers, Finance, Washington, D.C., 1832, vol. 5, p. 132.

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economic situation. Shipping interests suffered enormous losses and an estimated 100,000 mechanics and laborers were unemployed. 12

The economic effects of the embargo were not entirely harmful, as the measure served to encourage many new manufacturing enterprises. This aspect of the situation was disregarded, however, when Massachusetts was confronted with the ruin of her vital mercantile businesses. Over one hundred towns adopted resolutions against the embargo. 14

Neponset industrialists, for the most part, held to the Federalist, anti-embargo viewpoint. The signatures of Baker, Hollingsworth, Pierce, Preston, Savels and Tileston are affixed to a Dorchester protest, dated February 2, 1809.

Although they were affected by general economic conditions,

¹²Harold U. Faulkner, American Economic History, fifth edition, New York, Harper & Brothers, 1943, pp. 233-4.

¹³ Ibid., p. 250.

^{14&}lt;u>Ibid</u>., p. 234.

^{15&}quot;Dorchester Controversy," MS, no. 2 in MS 1273, Rare Book Room, Boston Public Library.

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Neponset paper manufacturers were shielded from foreign competition by a double wall: the protective tariff and the curtailment of imports resulting from the European wars. In 1810 Secretary of the Treasury Gallatin listed paper among the branches of industry that were firmly established. He found that the "greater part of the consumption of paper is of American manufacture". 16

The secure position of domestic producers was imperilled by the peace which followed the defeat of Napoleon, when a flood of goods from Europe came on the American market. 17 The tariff of 1816 was a bulwark, but it did not seem high enough to local paper manufacturers. They met in Boston to ask Congress for an increase in the duty levied on paper. 18

The Massachusetts paper manufacturers realized that more effort was needed to protect their interests. Mercantile groups had opposed the tariff of 1816, fearing that its

^{16&}lt;sub>Gallatin</sub>, op. cit., vol. 2, pp. 426, 428.

¹⁷Faulkner, op. cit., p. 169.

¹⁸ Valdemar Carlson, "Associations and Combinations in the American Paper Industry," MS, Ph. D. thesis, Harvard University, 1931, pp. 293-4.

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would stifle trade. Placing the interests of merchants above those of manufacturers, Daniel Webster had voted against the tariff of 1816. The Massachusetts legislator came over to the protectionist viewpoint in 1828, when he voted for the tariff. This indicated the shift in political power from the merchant to the manufacturing class. 19

The Tariff Act of 1833 contained a provision that struck a blow at the protective principle. All rates were to be reduced gradually, so that by 1842 no duty would exceed twenty percent. Two factors prevented this provision from being carried out. First, the panic of 1837 seriously curtailed the income of the national government. As a consequence, new sources of revenue were needed and increased levies on imports were urged. Second, all groups favoring protection exerted themselves mightily to restore their cherished principle to the tariff laws. 20

Participating in the general revival of pretectionism, a national paper association met in New York in 1842. The members of the Massachusetts delegation were E.P. Tileston and A. Curtis. Even the low-tariff South was in attendance,

¹⁹ Faulkner, op. cit., p. 170.

²⁰Ibid., p. 172.

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¹⁹ sulkner, op. cit., p. 170.

²⁰ Ibld., p. 172.

with delegates from paper mills in Maryland and Virginia. The convention requested that tariff rates should not fall below the 1839 level. A gloomy picture was painted of the ruin that would prevail in the industry if foreign paper were allowed to invade the American market. With the support of the Whig majority in Congress the tariff enacted in 1842 raised rates nearly to 1824 levels. However, when the Democrats regained control in 1845, they promptly lowered the duties. 22

Summing up the general movement of tariff rates, Faulkner writes, "The tendency of the tariff rates from 1832 to the Civil War was generally downward, although the principle of protection was never relinquished." 23

Weeks, op. cit., pp. 102-3; Bishop, op. cit., vol. 2, p.459.

²¹ Carlson, op. cit., pp. 295-311.

²²Faulkner, op. cit., p. 172.

²³ Ibid. The following table illustrates the fluctuations in the tariff on paper:

<sup>1789 7%
1790 10%
1794 15%
1816 30%
1828 10-20¢</sup> per pound
1846 30%
1857 24%
1862 30%

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^{1789 105} 1794 155 1816 305 1846 305 1846 305 1846 305 1867 245

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CHAPTER VI

CONTROVERSIES INVOLVING THE NEPONSET MILLS

The Neponset is a placed stream but it has caused a great number of disputes. Controversies flared up involving the Neponset mills and two other groups, the up-river fishermen and a group of mills on the Charles River.

The vexing problem of how to adjust the conflicting interests of down-river mill and dam owners and up-river fa rmers (who turned fishermen during the spring run) troubled the General Court for a century. A law passed during the 1709-1710 session banned the erection of obstructions to the passage of fish up-river during the spring run. A stipulation was made that the law was not to "be construed to extend to the pulling down or demolishing of any mill-dam already made, or that shall hereafter be lawfully and orderly made". The law was made more stringent in 1727 and 1735. In the latter year it was ordered that future dams should incorporate sluices to allow fish to make their way up the river during the spawning season.²

Acts and Resolves of the Province of Massachusetts
Bay, 1709-1710, ch. 7.

²<u>Ibid.</u>, 1727, ch. 10; 1735-6, ch. 21.

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CONTROVERS LEVOLVENCE THE REPORTED MILLS

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Late and Resolves of the Province of Massachusetus Bar, 1709-1710, ch. 7.

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The obvious difficulty of such laws was that a free passage-way for fish provided a free passageway for impounded water. If the law were obeyed, the mills would have had to cease operations for thirty days. The intend of the law was evaded to the "great decay and ruin" of the fisheries. Each session from 1741 to 1746 saw the annual enactment of measures facilitating the passage of fish to the up-river reaches where the yeomanry waited to net them. In 1746 the towns of Stoughton and Sharon petitioned the General Court, requesting that gates be built in the dams located in Milton and Dorchester, to allow the fish to get past these obstructions. The project was condemned by the people of Milton, who objected to the threatened six-week stoppage of their grist mills. Controversy flared up again in 1763.5

The tug-of-war continued after the Revolution. In 1782 the pressure of the up-river citizenry was strong enough to obtain legislative sanction for fishways to be built in three of the Neponset dams. Alterations were to be made at the expense of the towns of Stoughton, Stoughtonham and

³Acts and Resolves of the Province of Massachusetts
Bay, 1741-2, ch. 16.

⁴<u>Ibid.</u>, 1741-2, ch. 16; 1743-4, ch. 26; 1745-6, ch. 20.

⁵Dorch. Hist., pp. 589-591.

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^{&#}x27;inid., 1741-2, at. 16; 1743-4, ab. 26; 1745-6, ah.20.

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In 1790 a new start was made. All previous laws protecting the Neponset fisheries were repealed. Detailed specifications were drawn up, designating the size of sluices which all dams were to install. Stoughton and Sharon were empowered to appoint committees, which would open the passageways if the dam owners refused to do so. The law evoked protests from Dorchester and Milton. After hearing both sides, the legislature empowered the Norfolk County Court to appoint a committee of three disinterested individuals to supervise the enforcement of the act. No residents of the towns involved in the dispute were to be members of the committee. 9

Despite the act, in 1799 a new dam was erected at Lower Mills and the old passageways were closed. Men from

⁶Acts, 1782, ch. 15; 1783, ch. 63; 1784, ch. 71.

⁷ Acts, 1790, ch. 45.

⁸Resolves, 1796, ch. 10A.

⁹ Acts, 1796, ch. 83.

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⁶ Acts, 1762, ch. 15; 1763, ch. 63; 1764, ch. 71.

⁷ Acts, 1790, cn. 45.

Hesolves, 1796, ch. 104.

Agts, 1796, ch. 83.

Sharon and Canton came down to open the dams. The invaders were turned away by the mill owners and their workmen. Balked by their vigilant foes, the up-river towns turned to the General Court for assistance. Another committee was appointed, with power to inspect dams and order the construction of sluices, if necessary. One-quarter of the expense of such alteration in any dam was to be borne by Sharon, Stoughton and Canton, the remainder by the owner of the dam. 11

In May, 1805, the committee inspected the Baker and Vose dam at Lower Mills and ordered certain changes to be made. The owners refused to do so until the following spring. The committee rejected this counter-proposal and proceeded to erect a fishway at a cost of \$274.53. Edmund Baker refused to pay the share of the expense which the committee assessed him. Suit was filed and the case was appealed to the Massachusetts Supreme Judicial Court in 1808. Baker won the suit. The judges' ruling was based, not on the invalidity of the law, but on a technicality. They

¹⁰ Dorch. Hist., pp. 590-1.

¹¹ Resolves, 1804, ch. 143.

In May, 1805, the committee inspected the Baker and Vose dam at Lower Mills and ordered certain changes to be made. The owners refused to do so until the following spring. The committee rejected this counter-proposal and proceeded to erect a fishway at a cost of \$274.53. Educad Baker refused to pay the share of the expense which the committee assessed him. Buit was filed and the case was appealed to the Massachusetts Supreme Judicial Court in 1808.

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baker won the suit. The judges' ruling was based, not on the invalidity of the law, but on a technicality. They

¹⁰ porch, Hist., pp. 590-1.

¹¹ Rosolves, 1804, ch. 143.

found that the exercise of the committee's power had not been formally correct. 12

The subsequent course of legislation indicated that the defeated up-river towns had decided that the gains to be deriwed from the fisheries would not balance the losses sustained in the fight. The alewives seemed to breed nothing more than controversy. Perhaps the attorney for Baker had not been exaggerating when he declared, "There had not been a fish of the species which these proceedings were intended to protect for more than half a century, except such as had been carried in tubs." In 1810 a repealer was passed by the legislature, voiding the 1797 and 1805 laws protecting the fisheries. Thus the struggle ended with victory for the dam-owners. The welfare of industry was deemed superior to that of its persistent opponents.

¹² Massachusetts Supreme Judicial Court, Massachusetts Reports, vol. 4, pp. 521-6, "The Inhabitants of the Towns of Stoughton, Sharon, and Canton v. Edmund Baker and Daniel Vose."

¹³ Ibid., p. 526.

¹⁴Acts, 1810, ch. 45. A summary of this legislation is found in Oscar Handlin and Mary F. Handlin, Commonwealth: A Study of the Role of Government in the American Economy: Massachusetts, 1774-1861, New York, New York University Press, 1947, p. 77.

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Internecine disputes among the Neponset dam-owners were largely a nineteenth century phenomenon, a consequence of the intensive utilization of power-sites. During the eighteenth century, the records, for the most part, show friendly agreements and adjustments. Thus, in 1717, Rev. Belcher, owner of the original grist mill, made a deal with Walter Everenden, who manufactured powder on the Milton side of the dam. The minister yielded his one-eighth interest in the powder works. In exchange, the grist mill was to receive all the water during dry spells. In 1795 the owners of the two clusters of mills above the Milton bridge agreed to use the water in their common pond on alternate days during times of low water. The agreement was still in force in 1822.

During the last decade of the century a controversy took

place, symptomatic of the new situation on the river.

Jeremiah S. Boies erected a dam in 1793, one-third of the

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An enterprising paper manufacturer entered the scene to disturb the serenity prevailing at Lower Mills. Isaac Sanderson was an innovator. He had produced the first folio and quarto letter paper in New England. At a later date he was to patent a process for making paper from beach grass. In 1810 he purchased the original paper mill, which he rebuilt. In 1822 he built a new dam, which he joined to Preston's, on the Dorchester side of the river. The project would have been quite commendable but for the fact that the new dam backed water against the whells of the neighboring up-river mills, owned by Edmund Baker. 19

Edward Tileston, who rented the Baker paper mill, complained that the usefulaness of the mill had been cut in half.

Prior to Sanderson's erection of the new dam, the paper mill wheel turned the rag engine with sufficient velocity

^{17&}lt;sub>Dorch, Hist.</sub>, pp. 631-2.

¹⁸<u>Ibid.</u>, pp. 616-617; Munsell, op. cit., p. 80.

¹⁹ Massachusetts Reports, "Edmund Baker v. Isaac Sanderson," vol. 3, p. 350.

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to supply two vats with pulp. Now, he stated, the reduced speed of the wheel had cut output to such an extent that only one vat could be operated.²⁰

Confronted by a serious financial loss, Baker brought suit against Sanderson. The court decided in favor of Baker and when Sanderson appealed to a higher court, the verdict was sustained. 21

The backwater problem figured in agreements reached in 1924 between the Dorchester Cotton and Iron Factory, on the one hand, and Tileston and Hollingsworth (in partnership) and Amasa Fuller, on the other. The textile company paid \$1500 to Tileston and Hollingsworth and \$750 to Fuller in order to obtain the right to have its backwater rise to a specified height against the dams of the payees. In exchange, the papermakers agreed not to press suits for damages due to backwater.²²

It will be noticed that the backwater issue progressed farther and farther up the river, with the passage of time.

^{20 &}quot;Walter Baker Letter book," Dec. 12, 1822.

²¹ Massachusetts Reports, "Edmund Baker v. Isaac Sanderson," vol. 3, p. 350.

^{22&}quot;Norfolk Records," MS, vol. 72, pp. 126-130.

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²¹ tessenhuseita Reports, "Edmund Baker v. Issae Sanderson," vol. 3, p. 150.

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The next dispute involved the individuals who had been the recipients of the textile firm's bounty. Tileston, Hollingsworth and Fuller were co-defendants in a suit pressed by William Sumner. He charged that the three defendants had placed flashboards on their dam in 1799, backing water against his dam. He contended that his wheel had been slowed down, with consequent loss of power and production. The case was carried to the Supreme Judicial Court in 1828. The judges ruled that the down-river mill owners would have to pay Sumner for the losses they had caused him. 23

Antedating these court decisions was a struggle between dam-owners on the Charles River and their counterparts on the Neponset. The issue involved was basic, for it involved power, the motive power drawn from the flow of the two rivers. While the Neponset proprietors squabbled among themselves over backwater, they were united in opposing the efforts of the Charles River group to cut down the flow into the Neponset.

Low water was a serious problem to dam owners and industrialists. In the 1820's, periods of warm, dry autumh

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Tileston et al," vol. 7, pp. 198-207.

weather reduced the flow of the river, seriously hampering production. Scheduled production of chocolate at the Baker plant was set back as much as three weeks. 24 Under these circumstances, every additional trickle of water was an asset, not to be relinquished without a struggle.

The quarrel between the proprietors on the two rivers involved no mere trickle. At issue was the diversion of one-third of the Charles River into the Neponset. It was no natural providence that made the Charles a tributary of the Neponset. In 1639 residents of Dedham constructed one of the first canals in the English colonies. They connected the Charles with a small stream (known variously as East Brook, Mill Creek and Mother Brook) which fed into the Neponset. The Dedhamites were interested in obtaining enough water to be dammed and used to run a grist mill.²⁵

The reaction of the Charles River interests to this forced transfusion was a long time in coming. In 1767 residents of Newton dispatched a committee to the governor and his council to protest against the diversion of water. Their

^{24&}quot;Walter Baker Letter book," Octover 3, 1823; October 4-25, 1825.

²⁵Arthur B. Tourtellot, <u>The Charles</u>, New York, Farrar and Rinehart, 1941, pp. 114-121; Erastus Worthington, <u>Historical Sketch of Mother Brook</u>, Dedham, Mass., 1900, p. 2.

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arguments were convincing and the Commissioners of Sewers erected a line of stakes in the main stream and an obstruction in Mother Brook, to check the flow out of the Charles. 26

Not satisfied with this victory, or to safeguard their gains, the Charles River mill owners below Newton Upper Falls (the proprietors affected by the Mother Brook diversion) incorporated for their mutual protection in 1797. Their Neponset rivals quickly followed suit and organized a corporation for the purpose of "protecting, defending or recovering their common rights". The membership was made up of proprietors of mills on the Neponset and Mill Creek. 28

The charters of the two corporations were reaffirmed in 1808. A clause was inserted providing for the appointment of commissioners by the Suprmeme Judicial Court. The group's function was to supervise the clearing of obstructions from the Charles River and Mother Brook, with

Worthington, op. cit., p. 7.

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due regard for the rights of the two parties. Fair division of water between the two groups of claimants was to be attempted.²⁹

The following year three commissioners were appointed.

On investigation, they found that the sill constructed in 1767, which would have kept some of the water from the Charles out of the Mother Brook channel, had been removed. the commission ordered a new obstruction to be built, specifying that three-fourths of the water was to be retained by the main stream.³⁰

This order was very distasteful to the mill owners on the Neponset and Mother Brook. They felt that the proportion of water granted to them was not equitable. They did not attack the commission directly, but through a flank attack, challenging the legality of its report. In the ensuing court battle, they advanced the claim that in 1767 a commission had found that the flow down Mother Brook was more than the three to one ratio granted them by the nineteenth century commission. They charged that the obstructions placed at the mouth of the brook tended to change the ratio in favor of the Charles River interests.

²⁹Acts, 1808, ch. 8; Acts, 1809, ch. 100.

³⁰ Worthington, op. cit., pp. 8,9.

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While stakes had been driven into the Charles, they pointed out, the commission had erected solid barriers in Mother Brook. The effect of these devices, they claimed, was to deepen the channel of the main stream, relative to the bed of Mother Brook, resulting in an increased flow down the Charles. The court ruled against the Neponset corporation, in a decision handed down in 1828.

The struggle was not in vain, however. In a few years they succeeded in obtaining a greater share of the flow. In 1831 a committee representing the Neponset group sought an agreement with their rivals. Jeremiah S. Boies, Frederick A. Taft and Edmund Tileston, the members of the committee, negotiated a compromise with the Charles River corporation. They increased the Neponset's share to one-third of the total flow of the Charles. The allotted proportions were to be maintained by erecting two sills or dams in the Charles and two in the brook. Settlement of disputes was to be handled by one impartial person chosen by each corporation. If disagreement persisted, the two were to appoint a third arbitrator. 32

³¹ Massachusetts Reports, "The Proprietors of Mills on Charles River, Petitioners, v. The Proprietors of Mills on Mill Creek and Neponset River," vol. 7, pp. 207-9.

^{32&}quot;Norfolk Records," vol. 96, pp. 157-8.

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Both parties seemed satisfied with the agreement, for they re-affirmed it in 1846.³³ Not until 1900 was there any further legislation on the subject. In that year the General Court passed an act enabling mill owners on Mother Brook and the Neponset to petition the Superior Court of Norfolk County to appoint a commissioner to protect the flow into Mother Brook.³⁴ Both corporations were dissolved in 1931.³⁵ Steam and electricity had long eliminated the vexing problems of backwater and low water that had plagued Neponset industrialists.

^{33&}quot;Norfolk Records," vol. 169, p. 2. In 1846 a group of Neponset mill owners incorporated as the Neponset Reservoir Company and erected a dam at the headwaters of the river in Foxboro. The impounded water was to be released in dry spells. Dorch. Hist., p. 575.

³⁴ Acts, 1900, ch. 161.

^{35&}lt;sub>Acts</sub>, 1931, ch. 299.

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CHAPTER VII

SUGGESTIONS TO TEACHERS

To the history teacher the most obvious use of the foregoing study is as illustrative material. In a number of
cases, events reviewed in standard textbooks could be
made more meaningful by the use of local examples. For
instance, the theory and practice of mercantilism can be
brought close to home by mention of Governor Hutchinson's
careful scrutiny of industrial developments along the
Neponset. The latent hostility of the British can be
contrasted with the hearty encouragement which the
Massachusetts General Court gave to local industry.

The procedure suggested above is a selective one, utilizing various parts of the study. This method is advisable where the customary chronological arrangement of American history is followed. Where the unit or topic plan is employed, the study as a whole might be used, with good results.

Let us sketch, in broad outline, some of the major concepts that might be included in a topic or unit on the development of American industry. The unit would trace the transformation of economic organization from the domestic stage,

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to the mill, to the factory. Technological improvements would be shown by the advance from hand labor to water power, to steam, to electricity. Changing trends in ownership would be illustrated by the transition from merchant capital to industrial capital, both characterized by local proprietorship, to finance capital, characterized by outside ownership. Concurrently, the concentration of production into fewer firms would be noted. The topic or unit might conclude with the study of wages and hours, child labor and union organization.

These are developments that took place on a national scale. Note that every one of them has had local manifestations. The history of the mills along the Neponset is the history of American industry in miniature. American history, after all, is the sum, the resultant, of the myriad swarm of local events and forces.

In planning student activities, the teacher could subdivide the topic along the lines suggested by the several
chapter titles. Another approach would be to have the
student committees study the history of the major industries, chocolate, paper and textile. The less historicallyminded students could investigate the mills as they are
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The question of availability of material confronts us, at this point. The major sources of information are the <u>History of the Town of Dorchester</u>, written by a committee of the Dorchester Antiquarian and Historical Society, and Teele's <u>History of Milton</u>. The public libraries of Boston and Milton have copies of both works at their central libraries. In addition, the branch libraries of Milton have copies of Teele's <u>History</u>. Students may consult the <u>History of the Town of Dorchester</u> at the following branches of the Boston Public Library: Dorchester, Lower Mills and Neponset.

A list of suggested activities follows:

Drawing and Modeling

Map of the Neponset, locating the mills at various periods.
Pictures or models of mills.

Field Trips

The Walter Baker Company
Tileston and Hollingsworth Company
The Suffolk Resolves House
The Dard Hunter Paper Museum, Massachusetts
Institute of Technology

Interviews

The Metropolitan District Commission and local members of the General Court, regarding plans to end pollution and provide swimming beaches and recreational areas along the Neponset.

Massachusetts Bureau of Fisheries and Wild Life, regarding plans to restock the Neponset with fish, once the pollution problem is solved.

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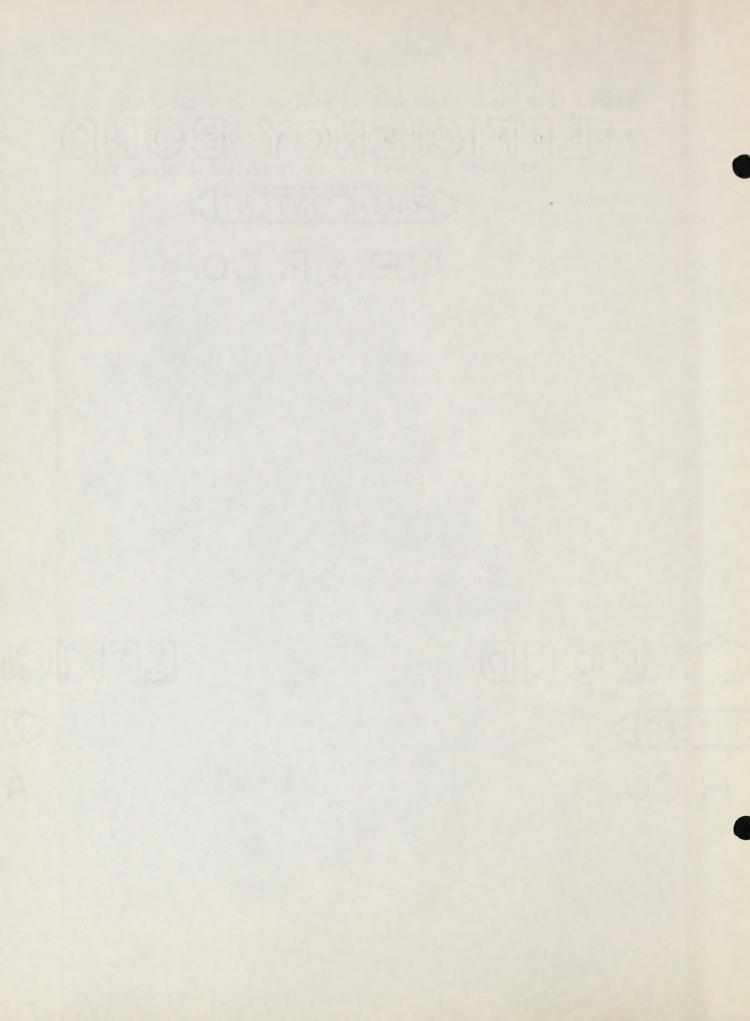
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Making this study available to students is a far from easy task. The pioneer nature of the project should be a spur to creative teachers in the communities along the Neponset.



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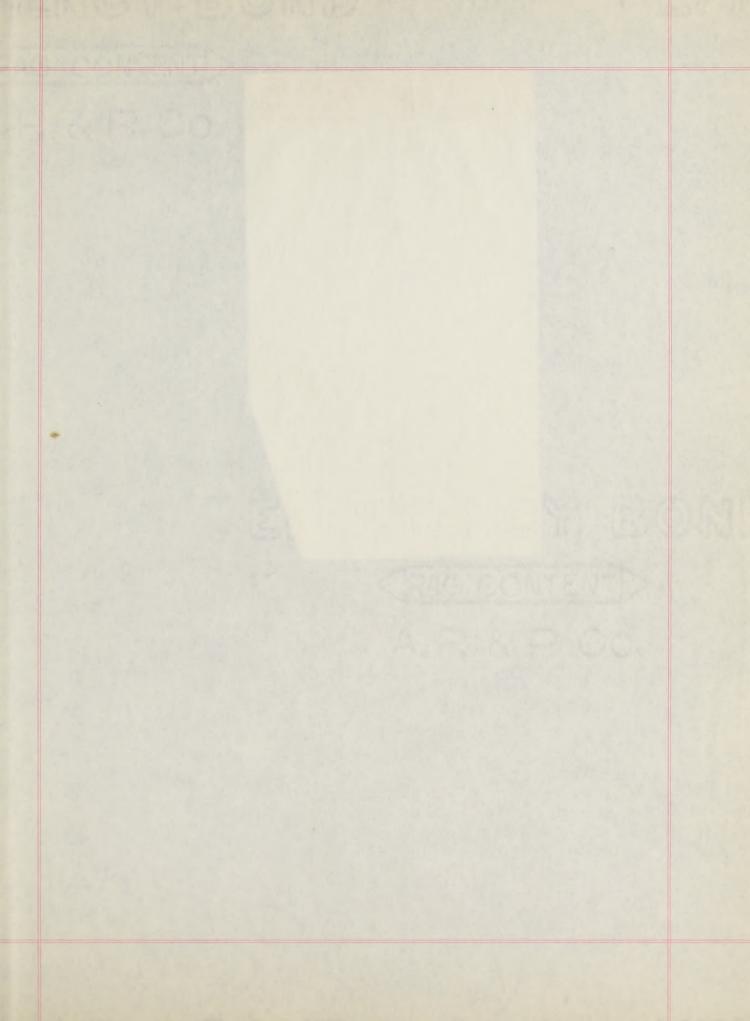
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